LEAD HAZARD CONTROL SPECIFICATION

for

Project Lead-Safe KCK
Wyandotte County, Kansas

October of 2005

INTRODUCTION AND USE

The Lead-Based Paint Hazard Control Guide Specification for Project Lead-Safe KCK in Wyandotte, Kansas (LSKCK) contains specification sections for the use of lead-safe work practices, as well as the permanent and temporary control of lead-based paint, lead hazards, lead-based painted surfaces, lead-containing materials, and other specific items on and in the dwelling units and properties as specifically shown on Attachment A, as produced by LSKCK Staff.

The Project Designer who developed these specifications depended completely upon and relied solely upon the information provided to him by LSKCK Staff, without any independent verification of any information or test data provided. Any questions regarding the nature, existence or severity of lead-based paint or lead hazards should be directed to the LSKCK Staff.

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PART 1 - GENERAL

1.1 SUMMARY

A. Location of Work

The Project consists of Lead-Based Paint (LBP) Hazard Control Work Activities on the interior and exterior of the Buildings and properties listed on each specific Attachment A, as provided by LSKCK staff to Contractors.

B. Extent of Work

The primary purpose of this Lead-based Paint (LBP) Hazard Control/project (Project) is to properly control all lead hazards and to stabilize all existing lead-based paint (LBP). This Project will consist of the proper implementation of LBP abatement strategies, interim control strategies and temporary lead hazard control strategies. For specific abatement/hazard control strategies by building and unit address, refer to Attachment A, which is a listing of specific abatement strategies for specific components and substrates, by dwelling unit address. A brief and non-inclusive summary of the various types of generic abatement strategies and interim control strategies that are applicable to the Project extent of work and binding to the contract documents are as follows.

1. Removal and disposal of lead containing materials with full containment and replacement with new components: see Section 02065 - "Removal of Lead Containing Materials".

2. Encapsulation of lead-based paint: see Section 09802 - "Encapsulation “.

3. Enclosure of lead-based painted items with Wood, Vinyl, Metal or Gypsum Wallboard Enclosures: see Sections 05582, 06106, 06107, and 09252.

4. Physical removal of lead-based paint from a substrate: see Section 09953 - "Physical Removal".

5. Chemical removal of lead-based paint from a substrate: see Section 09953 - "Physical Removal”.

6. Soil and exterior dust abatement, see Section 02066: "Remediation of Lead-Contaminated Soil and Exterior Dusts".

7. Paint film stabilization of existing surface coatings, see Section 09952: “Painting”.

C. As a minimum, Contractor shall provide all work and services in strict accordance with 29 CFR 1926.62; the OSHA "Lead Exposure in Construction" regulation, as outlined in Section 01094 of this specification, and all other local, state, and federal regulations which are applicable to work with or the hazard control/abatement of lead hazards and lead-based paint. It is the Contractor’s responsibility to be aware of and abide by the more stringent of all local, state and federal regulations, statutes, ordinances and standards.

D. The abatement or interim control of Lead Hazards, lead containing materials, lead-based paint and/or soil and exterior dust abatement includes, but is not limited to, the following:

1. Initial cleaning and preparation of the abatement areas (e.g. work area set-up) including:

   a. Initial cleaning;
   b. Erection of all containment barriers;
   c. Providing all necessary utilities;
   d. Construction of adequate and appropriate decontamination facilities, or bringing on-site an adequate and appropriate mobile decontamination facility; and,
   e. Establishment of all critical barriers and airlocks/door flaps.

2. The abatement and/or interim control of lead-based paint and/or lead hazards (whether finish coat, intermediate coat, or prime coat paints or any paint or surface coating), any lead containing materials, and/or soil or exterior dust includes areas indicated in other sections of the specifications, on the drawings (if provided), in LSKCK provided Attachment A and in A. of this section.

3. Clean all abatement areas and meet clearance standards:

   a. Conduct thorough daily cleaning of all debris, waste, and dust;
   b. Pass visual inspection by LSKCK staff or contracted Consultant of completion of abatement;
   c. Pass visual inspection by LSKCK staff or contracted Consultant of completion of cleaning; and,
   d. Pass dust lead wipe test clearance testing.

4. Obtain all proper approvals and properly/legally dispose of all debris and materials, based on the more stringent of Treatment, Storage & Disposal facility (e.g., landfill) and KDHE

requirements. If required, dispose of all debris and wastes in accordance with the results of

hazardous waste characterization testing (e. g., Toxicity Characteristic Leaching Procedure [TCLP] tests or other applicable hazardous waste characterization tests and analyses).

5. Provide documentation required for all completion and closeout items.

6. Provide properly trained and certified supervisors and workers in accordance with the requirements as set forth by the Kansas Department of Health and Environment (KDHE) lead certification and licensing program and other requirements of this specification.

   a. Contractors must demonstrate that they have (or will have prior to commencement of any work effort) a sufficient number of all necessary professionally skilled trades and certified/licensed abatement workers who have successfully completed state approved EPA model curriculum training in lead-based paint abatement, so as to be able to complete all aspects of all lead hazard control and all other work required in a professional and workman-like manner, according to all applicable standard industry practices.
   b. Contractors shall specify at least one (1) on-site supervisor/competent person who is fully and professionally qualified in all aspects of lead hazard control/abatement practices and procedures, lead-safe work practices and procedures and meets all EPA/KDHE/OSHA supervisor/competent person requirements.

7. Maintain all records so as to comply with all applicable portions of KDHE, OSHA and EPA requirements, all requirements of this specification, as well as all other local, state and federal requirements. KDHE requires that all abatement records be properly maintained for a period of at least three (3) years.

E. Related Work

General provisions of the contract, including general and supplementary conditions, addenda, Attachment A, all Divisions 1, 2, 5, 6, and 9 of the specifications, and all other sections of the specification as may be added, shall apply to the work of this section. The above mentioned contract documents show the work of the contract and related requirements and conditions impacting the project. Related requirements and conditions include, but are not limited to, among other things: applicable codes and regulations, notices and permits, existing site conditions and restrictions on use of the site, requirements for partial owner occupancy during work, coordination with all other work and phasing of work. Whenever there is a conflict or overlap of any of the above requirements, the most stringent provisions shall apply.

F. Substitution

LSKCK encourages and welcomes all innovations, new technologies and all considerations for substitution or alteration of any hazard control methodology. If Contractor believes or knows that a better and less expensive methodology or strategy exists to accomplish the same effect as a hazard control strategy that is shown in the specifications or Attachment A, Contractor shall bring it to the attention of LSKCK. Any substitution in materials or methods to those specified or shown on Attachment A shall be approved by LSKCK **prior** to any use. Any requests for substitution must be provided in writing to LSKCK. The Contractor's written request shall clearly state the rationale for the substitution, all product data and all samples of all materials to be considered as an alternate.

1.2 EXAMINATION

Prior to commencement of any work, examine all areas in which any work will be performed with the LSKCK staff. Prepare a listing of all damage to all structures, surfaces, and equipment or of all surrounding properties that could be misconstrued as damage resulting from the Contractor's work.

Photograph or videotape existing damaged conditions as necessary to document all existing conditions. Submit proof and evidence of existing damage to LSKCK staff prior to starting any work.

1.3 POTENTIAL LEAD HAZARD

The disturbance or dislocation of lead-based painted materials and/or any lead containing material may cause lead dust to be released into the buildings' atmosphere, thereby creating a potential health hazard to workers, future building occupants, persons in adjacent structures, and the general public. Apprise all workers, supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the hazard and of proper work procedures that must be followed. Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified, known or assumed lead hazard or lead containing material, take appropriate and continuous measures as necessary to protect all persons at all times from all potential hazards resulting from exposure to lead dust, or any other media containing lead. Such measures shall include the procedures and methods described herein, as necessary for a finished and professional piece of work, in accordance with all industry standards, and in compliance with all regulations, standards and guidelines of applicable federal, state and local agencies.

1.4 STOP WORK

If LSKCK staff presents a written or verbal stop work order, or if stop work levels as set forth in the

Contract Documents are exceeded, Contractor shall immediately and automatically stop all work. Contractor shall not recommence work until authorized to do so in writing by LSKCK staff.

1.5 NOTIFICATIONS/REPORTS

Contractor shall properly acquire, complete, make, file, document, and retain all required notifications to LSKCK staff, the state and/or all tenants, as required by all local ordinances, all state laws and statutes, all EPA and/or HUD laws, as well as any and all other federal laws, standards and regulations. Contractor shall ensure LSKCK staffs are provided with clean and legible copies of all notifications, filings and reports.

1.6 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.7 SEQUENCING/SCHEDULING

A. The Contractor shall give adequate notice to the homeowner and/or tenant of the property prior to work commencement.
B. The Contractor shall give adequate notice to LSKCK staff prior to work commencement.
C. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

Not used.

PART 3 – EXECUTION

3.1 DAMAGES AND COSTS

A. Contractor shall document all existing damages. All and any damages to any and all

components, items, fixtures, surfaces, substrates, sub-structures, or areas on or in dwelling units, buildings, structures or properties occurring as a result of any and all Contractor

work and/or sub-contractor work activities or actions shall be immediately repaired or replaced at the Contractor's sole expense, to the satisfaction of the Owner and/or LSKCK staff, with no additional cost to the Owner or the LSKCK project. The Contractor will not be allowed any additional time allowances or extensions for any such circumstances or events.

B. Contractor shall be financially responsible for any and all time delays, beyond those occurring as a result of acts of God, strike, war or natural disaster. The Contractor's financial responsibility shall include, but not be limited to, any and all liquidated damages, occupant relocation costs, etc. All costs for which the Contractor is responsible shall be paid for by the Contractor in the form of a deduct change order from the original contract amount.

3.2 TENANT/OCCUPANT PROTECTION

A. In some circumstances, the dwelling units may be at least temporarily occupied. Regardless of occupancy status, in all instances, the Contractor shall ensure that all tenants/occupants, their belongings and their pets are fully protected from any exposure to any and all environmental hazards. Contractor shall ensure that no occupants are allowed into any work area and that their belongings and their pets are all properly removed from the work area, the regulated area and the containment area. Contractor shall ensure that all persons are made aware that all tenants/occupants and their pets, and particularly pregnant women and children, are specifically prohibited from entering the regulated area, containment area and the work area at any time, until completion of the abatement process (e. g., successfully achieving final clearance), including all times when work is not in progress.

3.3 EXISTING SURFACE CONDITIONS

A. Contractor shall examine all surfaces, all areas and all conditions under which any of the work of this section will be performed. Contractor must correct all conditions that may in any way be detrimental to a timely, proper, professional, and safe completion of all of the work. Contractor shall not proceed with any work until all unsatisfactory and all unsafe conditions are properly and completely corrected, to the complete satisfaction of LSKCK.

B. Contractor shall particularly observe all surfaces to determine that the wall or all other surfaces are in good condition and are ready to receive the enclosure materials. Any

surface to be worked on which contains any surface coatings which have poor integrity, or has any
dust or debris on it, or any type of damage, shall not be worked on until all unsatisfactory and/or damaged conditions are corrected to the complete and total satisfaction of LSKCK.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up, repair and/or stabilize all surfaces (on which any work will be installed) in accordance with all requirements of this specification.

3.2 CORRECTION OF EXISTING LEAD-BASED PAINT CONDITIONS

A. Contractor shall correct to make safe all existing lead-based paint (LBP) where his work is to be installed. Safe corrections or stabilization of existing LBP shall comply with all sections of this Specification and/or all applicable local, state and federal requirements, as applicable.

B. Contractor shall correct or remove all lead containing materials or make provisions for working on all lead contaminated soil and all other surfaces near and at the work site.

C. Prior to starting any work on any surfaces, Contractor shall as a minimum complete the following:

1. All surface coatings that are peeling, cracked, chipped, flaking, or in any way damaged, shall be properly, completely and professionally wet scraped and/or repaired, using proper and appropriate work practice controls and lead-safe work practices. Lead removing detergents may be added to water to facilitate scraping. All damaged areas 3"x 3" and larger shall be repaired prior to starting work. No scraping work shall be completed until the containment is operable and all worker protection, as required by OSHA and these specifications, are in place and being properly used.

3.3 CLEANING UP

A. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of all physical hazards, at all times during execution of all portions of the work.

B. The project site shall be kept free from all excessive accumulations of all waste and debris.

C. At completion of each segment of installation in a room or space, promptly pick up and

remove from the working area all scrap, all debris, all wastes, and all surplus materials. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

3.4 WARRANTY

All workmanship, all new components, all new items, and all materials shall be guaranteed by the Contractor to be free of defects, failures and flaws for a period of at least one (1) year from the date of substantial completion. All defective material or workmanship shall be immediately repaired free of charge to the Owner and LSKCK, and shall be painted and otherwise trimmed and finished to match the existing construction, in a professional and workmanlike manner that meets or exceeds all applicable standard industry practices.

END OF SECTION

SECTION 01044 - PROJECT COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. As a minimum, the Contractor shall meet the administrative and supervisory requirements necessary for the coordination of all work on the project concerning all personnel, emergency arrangements, and security as outlined in this specification section, as called out in other areas of the project documents and as needed for a professionally completed work product which complies in all respects with all regulatory standards, laws, guidelines, statutes, and regulations. Owner may provide full or partial waivers for certain specification requirements on a case-by-case basis. Contractor must provide a written request to Owner and receive a written affirmative response from Owner before any waivers are considered valid.

B. Related Work

General provisions of the contract, including general and supplementary conditions, addenda and/or amendments as may be issued, Division 1, 2, 6, and 9 specifications, and other Divisions of the specification as may be added apply to the work of this section. The contract documents show the work of the contract and related requirements and conditions impacting the project. Related requirements and conditions include: all applicable codes and regulations, notices and permits, existing site conditions and restrictions on use of the site, requirements for partial Owner occupancy during work, coordination with other work and phasing of work and other items as may be applicable. Whenever there is a conflict or overlap of the above requirements, the most stringent provisions shall always apply.

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of properly skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in all of the necessary skills, crafts, and who are completely familiar with all of the specified requirements and all of the methods needed for proper performance of all of the work of this specification.

B. Administrative and Supervisory Personnel

Qualified and certified/licensed hazard control supervisor(s)/competent person(s) shall be on-site for each dwelling unit. The administrative personnel shall work full time for the Contractor and be dedicated to this project. These employees are the Contractor's representatives responsible for all compliance with these specifications, as well as all applicable state, local and federal requirements. They must meet at least the minimum qualifications criteria described below. A minimum of one (1) supervisor/competent person shall be on-site at each hazard control project location, where eight (8) or fewer certified/licensed lead hazard control workers are on-site. Each additional eight (8) or fewer hazard control workers will require at least one (1) additional hazard control supervisor/competent person. Personnel employed in this position shall be pre-approved by the LSKCK Representative.

C. Non-Supervisory Personnel

An adequate number of qualified and certified/licensed lead hazard control personnel shall be on-site and be able to meet all schedule requirements of the project. All workers employed for hazard control throughout the project shall meet at least the minimum qualifications criteria described below. Personnel employed in this hazard control work shall be pre-approved by the LSKCK Representative.

D. Minimum Qualifications and Training

The Contractor and all assigned personnel for this project shall at least meet the following minimum requirements, unless LSKCK staff provides a specific written waiver to Contractor:

1. Lead Activity Firm

The Contractor shall:

- be licensed by KDHE as a Lead Activity Firm;
- have an established hazard control/remediation business for a minimum of one (1) year, have successfully completed at least two (2) Lead-based paint and/or other environmental contaminant remediation/hazard control projects, which are of comparable complexity and dollar value with this project;
- not have defaulted on any project within the last two (2) years, nor have been cited nor been a defending party of any legal action for violation of lead hazard control regulations during the last two (2) years;

- carry all forms of liability insurance for the conduct of Lead-based paint hazard control work;
- have an adequate number of professionally qualified, licensed and properly trained personnel readily available for this project;
- have a written standard operating procedure for training, medical surveillance, entry and exit procedures, respiratory protection, contingency, OSHA compliance, safety, emergency, and exposure/medical monitoring; and,
- have available all properly functional equipment, materials, and supplies in adequate quantity, efficiency, capacity, and number to properly perform all of the work of this project.

2. Supervisor/Competent Person

All Supervisors/Competent Persons shall, as a minimum:

- have at least two (2) years hazard control construction experience of which 1 year shall be as an Hazard Control/Abatement Supervisor;
- have worked as a Supervisor on at least three (3) projects, 2 of which are comparable in size and complexity to this project; have completed at least one (1) KDHE or EPA approved course of specialized training in Lead-based paint hazard control for Supervisors, which pertains to management and supervision of Lead-based paint hazard control; and,
- have appropriate medical records and be able to meet all other OSHA, EPA, local and state mandated requirements.

3. Workers

All Workers shall, as a minimum, have specialized training in:

- hazard control and construction;
- OSHA, EPA and KDHE regulations;
- the standard operating procedures of the company;
- Lead-based paint hazard reduction and control; and,
- respiratory protection.
-

All Workers shall, as a minimum, meet the following requirements:

- have completed a training course approved by KDHE or EPA-approved course and be certified/licensed by KDHE;
- have at least one (1) year of hazard control and construction experience;
- have completed an OSHA medical exam, have documentation of medical exams in their medical records; and,

- meet all other KDHE, OSHA, EPA, as well as any and all other regulatory requirements.

E. Emergency Plans

The Contractor shall prepare a written plan for emergencies including, but not limited to; fire, injury accident, power failure, spill of hazardous waste products or materials, failure of negative air system (if used), failure of supplied air systems (if used), or any other event that may require modification of standard operating procedures during hazard control. Include specific procedures to ensure safe and expedient exiting from the work area, and to provide medical attention in the event of an emergency. Contractor shall post the telephone numbers and locations of emergency services including fire, ambulance, hazardous materials team, doctor, hospital, police, and utility company(ies) in an area known to all personnel on-site. Contractor shall notify all of these emergency service groups as to the danger of entering the containment area and invite them to attend an informal training program by a qualified training provider/industrial hygienist on relevant aspects of Lead-based paint hazard control. Contractor shall provide assistance on developing emergency plans for responding safely and efficiently to any emergency during hazard control.

F. Security

The Contractor shall ensure the security of all dwelling units and all buildings during all periods of time that the property is in the control of the Contractor. The Contractor provide and properly maintain a bound log book with pre-numbered pages to ensure that every person desiring entry to any containment area will be logged in and that only properly trained, certified/licensed, medically approved and outfitted persons will be allowed to enter. Entrance shall also be allowed to any authorized LSKCK representatives and inspectors from regulatory agencies. If requested, Contractor shall supply all personal protective equipment - PPE (except for respirators) to LSKCK representatives and inspectors from regulatory agencies. The Contractor shall be completely responsible for building security during all phases of all lead hazard control activity. This includes, but is not limited to, the proper covering (hard covering when necessary) of all entry/exit passages, first floor windows, and other first floor openings, as well as the posting of all signage which meets KDHE, OSHA, HUD and all other regulatory requirements.

G. Personal Belongings

The Contractor shall at all times protect all occupant belongings from all contaminants.

Contractor shall remove all moveable belongings from each and every work area. The

Contractor shall be responsible to ensure that all heavy or immovable items (e.g., radiators, radiator covers, stoves, refrigerators, cabinetry, etc.) remaining in any of the dwelling units, in any of the structures/buildings, or on any of the properties, shall be completely sealed from any exposure to leaded dusts and particulates with at least one (1) layer of at least 2 mil polyethylene sheeting (poly or plastic), or other means as may be necessary to ensure that no such items become in any way contaminated. Prior to reoccupancy by the tenants/occupants, Contractor shall completely decontaminate all heavy or immovable items that were left in place and sealed/covered.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 COORDINATING HAZARD CONTROL WORK

A. Project sites that have a number of different lead hazard control activities shall be coordinated in such a manner to prevent cross contamination of previously abated areas by anyone and/or anything. Work shall progress from the cleanest areas to the dirtiest areas, working towards the exit from the work area.

1. The general sequence of hazard control activities at any and all project sites shall be from first to last, in the following order:

a. All exterior leaded surface coatings are properly and professionally addressed;

b. All soil lead hazards are properly and professionally addressed;

c. All exterior dust lead hazards are properly and professionally addressed;

d. All interior leaded surface coatings are properly and professionally addressed; and,

e. All interior dust lead hazards are properly and professionally addressed.

3.2 DAMAGES AND COSTS

A. Contractor shall document all existing damages to the property and structure prior to the conduct of any work efforts. All damages to the structure or property occurring as a result of any and all Contractor work, activities or actions shall be repaired or replaced at the Contractor's sole expense, to the satisfaction of the LSKCK Representative and the Owner, with no additional cost to the Owner or the LSKCK project. The Contractor will not be allowed any additional time extensions or allowances for any such consequence or event.

B. Contractor shall be financially responsible for any and all time delays, beyond those occurring as a result of acts of God, strike, war or natural disaster. The Contractor's financial responsibility shall include, but not be limited to any and all liquidated damages, any and all additional occupant relocation costs, etc. All such costs for which the Contractor is responsible shall be paid for by the Contractor in the form of a Contractor deduct change order from the original contract amount.

END OF SECTION

SECTION 01093 - DEFINITIONS AND STANDARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Certain terms used in Contract Documents are defined in this section. Definitions and explanations of this section are not necessarily complete, inclusive or exclusive, but are general for the work to the extent that they are not stated more explicitly in another element of the Contract Documents.
If there is any question whatsoever as to the meaning or definition of a word or phrase in these specifications, the Contractor must refer to these definitions. If a definition is not provided herein, the Contractor must submit a written letter to LSKCK asking for clarification of any word or phrase that is used in these specifications, which the Contractor does not understand.

B. DEFINITIONS

1. ABATEMENT/HAZARD CONTROL – All procedures to control dust, debris, waste, or any potential release from any lead-containing materials or lead-bearing surface/substance, to prepare a surface to receive new paint films, to enclose a lead-bearing surface, to encapsulate a lead-bearing surface, to remove lead-based paint and leaded stain/varnish from an item or surface, to make an area or component inaccessible, or to remove completely the item which has the lead-based paint or leaded stain/varnish on its surface. A means of eliminating or reducing the potential for exposure to any surfaces, items or components containing lead. To be considered Abatement, the method/strategy must be permanent and must be known to last at least twenty (20) years. In-place management or interim controls are only considered to be temporary solutions (e.g., less than 20 years). Any activity requiring respiratory protection, as per this project, which disturbs or has the potential to disturb any lead-containing material and/or any lead-bearing surface/substance. This includes, but is not limited to, the following activities: set up; pre-cleaning; installing containments, polyethylene sheeting, critical barriers or barrier tape; establishment of regulated areas; stabilizing paint films; surface preparation; construction work activities; component or substrate removal; lead-based paint removal, encapsulation, or enclosure; removal of lead containing materials; final cleaning; and, all other activities in any way related to lead abatement, lead hazard control and/or construction.

2. ACTION LEVEL - Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter ($\mu g/m^3$) of air averaged over an 8-hour time period. As used in this section, "30 $\mu g/m^3$" refers to the action level.

3. ADEQUATE ELECTRICAL POWER - Sufficient electrical power needed to supply and properly energize all electrical equipment potentially used simultaneously by the Contractor and the LSKCK Representative without any degradation in voltage.

4. ADEQUATE WATER - Water shall be immediately available at sufficient pressure and in adequate volumes to supply hazard control/abatement, equipment and material decontamination, personal protection and decontamination, showers, cleanup, and all other decontamination needs. Adequate water supply shall mean at least a constant 15 minute uninterrupted supply.

5. AIR LOCK - A system for permitting ingress or egress to a work area, without permitting air movement from a contaminated area into an uncontaminated area, usually consisting of three sheets of overlapping 6-mil thick polyethylene, secured along alternating vertical edges and at the top.

6. AREA MONITORING - Sampling of lead in air concentrations within the work area inside the physical boundaries, and outside the work area, which is representative of the airborne lead concentrations which may reach the breathing zone of personnel and/or the general public.

7. CONSULTANT - An independent third party firm, group or person(s) (selected by Owner or LSKCK staff and/or their designated, authorized representatives).

8. CONTAMINATED WASTE - Lead contaminated materials, dust, water, waste, and/or debris.

9. CONTRACTOR - The Lead Activity Firm awarded a contract to conduct lead hazard control, construction and cleanup work activities. Any and all staff employed or sub-contracted for the purpose of conducting any type of lead hazard control, construction, set up, demolition, and cleanup work efforts.

10. CRITICAL BARRIER - A barrier consisting of the covering of any and all penetrations through ceilings, walls, floors of the building. The use of polyethylene sheeting and support framing as necessary, sealed with duct tape,

covering any and all penetrations and openings, such as, but not limited to; corridors to other areas of the building, doors, windows, flues, vents, drains, decontamination facilities, uncontaminated fixed furnishings, and stationary objects, such as electrical boxes, to separate and seal the abatement area from uncontaminated parts of the building. Doors not required for access or egress shall be locked/secured and additionally sealed around door edges with duct tape or other appropriate means on the opposite side. Windows shall be covered with layers of 6-mil polyethylene on the removal side. Any penetrations to the outside of the building shall be additionally sealed on the outside.

11. DECONTAMINATION FACILITY/UNIT - Area for the cleaning and removal of contaminated personal protective equipment (PPE), as well as the decontamination of all personnel. The five-stage decontamination unit (through which all hazard control/abatement personnel must pass upon entering and exiting the work area if the OSHA PEL is met or exceeded) shall be constructed of 6-mil polyethylene sheeting and consist of a dirty room, airlock, shower, airlock, and clean room in sequence. As an alternative, an appropriate and proper mobile decontamination facility may be used, providing that it at least meets all requirements for proper and thorough decontamination, to the satisfaction of the LSKCK representative.

12. ENCLOSURE - For the purposes of this specification, the barrier established by the Contractor to prevent leakage of contamination to occupied or other areas outside the work area. It also serves the Contractor as an aid by protecting the critical barrier from contamination and to expedite clean-up work.

    Also, an abatement strategy which is utilized by mechanically affixing a durable construction material barrier over a lead containing material/surface, so as to reduce the potential for exposure to that leaded surface. This abatement strategy must be known to last at least twenty (20) years.

13. HIGH EFFICIENCY PARTICULATE AIR (HEPA) FILTER - A filter capable of filtering out monodispersive particulates having a 0.3 micron or greater diameter from a body of air at a 99.97 percent efficiency or greater.

14. LEAD-BASED PAINT – Any surface coating containing equal to or greater than 0.5 percent (or 5,000 parts per million [PPM]) by weight of lead, or greater than or equal to 1.0 milligrams of lead per square centimeter of area. This definition includes all layers of all primer coats, all intermediate coats, and all finish coats.

15. LEAD HAZARD CONTROL - any and all means or procedures to reduce or eliminate the potential for exposure to any and all lead containing materials and lead-bearing surfaces/substances, whether temporary or permanent. Lead hazard control can include, but is not limited to, interim controls, in-place management, paint film stabilization, construction activities, and/or abatement.

16. LEAD PERMISSIBLE EXPOSURE LIMIT (PEL) - Fifty micrograms per cubic meter (50 $\mu g/m^3$) of air as an 8-hour time weighted average as determined by 29 CFR 1926.62. As used in this section, "50 $\mu g/m^3$" refers to the PEL.

17. LSKCK- Project Lead-Safe Kansas City, Kansas. A project that has been funded by the US Department of Housing and Urban Development to control identified lead-based paint and lead hazards in residential housing in the Wyandotte County, Kansas area. The project involves the use of lead-safe work practices to implement permanent and temporary controls. Also, staff of LSKCK, KDHE and/or a duly authorized representative of LSKCK or KDHE.

18. LOAD OUT - An area through which material and equipment are passed into the Removal Area and through which bags containing contaminated waste and contaminated equipment are cleaned and passed to the outside from the Removal Area. The cleaning process shall consist of HEPA vacuuming and wet-washing (ensuring complete decontamination) of all bags, drums, equipment, tools, or other items leaving the work area.

19. OWNER – The actual Owner of any and all dwelling units, properties and buildings, or an authorized representative of the Owner, on which any abatement, hazard control, construction and/or interim control processes will occur. The intended purpose of the project is to properly control all lead hazards in a lead-safe manner.

20. OWNER REPRESENTATIVE – A person and/or firm who has been contracted by the Owner to perform certain Owner designated work activities on this project.

21. PERSONAL MONITORING - Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with 29 CFR 1926.62. Samples shall be representative of all of the employee's work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulders, with a radius of 6 to 9 inches and the center at the nose or mouth of an employee, at a height of approximately 48 – 66 inches.

22. SECURITY BARRIER - A temporary wall of 1/2-inch thick CDX plywood on 2" by 4" stud construction at 16" o.c., floor to ceiling, to assure work areas are not entered by unauthorized personnel and to prevent accidental breaching. Where convenient, doors locked by and under the control of the Contractor may be used as a security barrier only after work hours. The work area side of Security Barriers shall be lined with reinforced polyethylene, sealed with duct tape and stapled where possible without damaging surfaces of floors, walls, and ceilings, prior to erection of removal enclosures.

23. SURFACE COATING – Any and all paints, stains, varnishes, shellacs, epoxies, lacquers, polyurethanes, and any/all other sealants and coatings.

24. VISIBLE DEBRIS - Any material containing lead or not containing lead that was generated or created as a result of any activity associated directly or indirectly with the abatement or hazard control project.

25. WET WASH SOLUTION - Solution containing trisodium phosphate (TSP) and water that is mixed to form a 5% solution, or a non-TSP lead sequestering detergent (e.g. LEDIZOLV or equivalent) that is mixed into a solution in accordance with manufacturer's directions.

26. WORK/REGULATED AREA - Indoors, the area within or being prepared for critical barriers or containment areas in which abatement or interim controls of lead-containing substances will, is or have taken place until acceptable visual inspections and successful final clearance sampling have been accomplished. Outdoors, the area usually within ten (10) feet of abatement or interim control operations which concern the control of lead hazards and/or the removal of lead-containing materials, lead-bearing surfaces/substances or lead-based painted items, until acceptable visual inspections and successful final clearance sampling have been accomplished.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01094 - CODES AND REGULATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. All work shall conform to the standards set by applicable federal, state, and local laws, regulations, statutes, standards, ordinances, and guidelines in such form in which they exist at the time of the work on the contract and as may be required by subsequent revisions. The Contractor has the full and acknowledged responsibility for being fully aware of, understanding and complying with any and all applicable federal, state, and local laws, regulations, statutes, standards, ordinances, and guidelines in such form in which they exist at the time of the work on the contract and as may be required by subsequent revisions. While the following is not meant to be construed as, nor shall the Contractor consider it to be, an all-inclusive list, this project is at least subject to compliance with the more stringent of the most current issue of the following non-inclusive list of regulations and publications:

1. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA):

a. 29 CFR 1910, *General Industry Standard*
b. 29 CFR 1910.20, *Access to Employee Exposure and Medical Records*
c. 29 CFR 1910.21, *Walking/Working Surfaces*
d. 29 CFR 1910.28, *Safety Requirements for Scaffolding*
e. 29 CFR 1910.30, *Other Working Surface*s
f. 29 CFR 1910.94, *Abrasive Blasting*
g. 29 CFR 1910.134, *Respiratory Protection*
h. 29 CFR 1910.145, *Signs and Tags*
i. 29 CFR 1910.1025, *Occupational Exposure to Lead* (General Industry)
j. 29 CFR 1910.1200, *Hazard Communication*
k. 29 CFR 1926, *Construction Industry Standard*
l. 29 CFR 1926.20, *General Health and Safety Procedures*
m. 29 CFR 1926.21, *Safety Training*
n. 29 CFR 1926.25, *Housekeeping*
o. 29 CFR 1926.28, *Personal Protective Equipment*
p. 29 CFR 1926.51, *Sanitation*
q. 29 CFR 1926.52, *Occupational Noise Exposure*
r. 29 CFR 1926.55, *Gases, Vapors, Fumes, Dusts, and Mists*
s. 29 CFR 1926.57, *Ventilation*
t. 29 CFR 1926.59, *Hazard Communication*
u. 29 CFR 1926.62, *Lead Exposure in Construction*

v. 29 CFR 1926.103, *Respiratory Protection*
w. 29 CFR 1926.200, *Accident Prevention Signs and Tags*
x. 29 CFR 1926.353, *Ventilation and Protection in Welding, Cutting, and Heating*
y. 29 CFR 1926.354, *Welding, Cutting and Heating in Way of Preservative Coatings.*

2. U.S. Environmental Protection Agency (EPA):

a. 40 CFR 260, *General Regulations for Hazardous Waste Management*
b. 40 CFR 261, *Identification and Listing of Hazardous Waste*
c. 40 CFR 262, *Standards Applicable to Generators of Hazardous Waste*
d. 40 CFR 263, *Standards Applicable to Transporters of Hazardous Waste*
e. 40 CFR 264, *Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities*
f. 40 CFR 265, *Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities*
g. 40 CFR 268, *Land Disposal Restrictions*
h. 40 CFR 302, *Designation, Reportable Quantities (RQs) and Notification*
i. 40 CFR 745, *Lead; Requirements for Lead-Based Paint activities in Target Housing and Child Occupied Facilities; Final Rule*

3. U.S. Department of Transportation (DOT):

a. 49 CFR 172, *Hazardous Materials Tables and Hazardous Materials Communications Regulations*
b. 49 CFR 178, *Shipping Container Specification*

4. American National Standards Institute (ANSI):

a. Publication Z288.2-80, *Practices for Respiratory Protection*
b. Publication Z9.2-79, *Fundamentals Governing the Design and Operation of Local Exhaust Systems*

5. U.S. Department of Health and Human Services, National Institute of Occupational Safety and Health (NIOSH):

a. Publication 84-100 and updates, *NIOSH Manual of Analytical Methods*

6. U.S. Department of Housing and Urban Development (HUD):

    a. "*Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing"*.

7. Underwriters Laboratories, Inc. (UL)

    a. Publication UL586, (1977; R 1982) *Test Performance of High Efficiency Particulate Air Filter Units*

8. State of Kansas Department of Health and Environment (KDHE)

    a. Article 72 – *Residential Childhood Lead Poisoning Prevention Program Licensure, Certification, Accreditation and Work Practice Standards Regulations:* 28-72-1 through 28-72-22.
    b. Article 72 - *Pre-Renovation Education (PRE) Regulations:* 28-72-51 through 28-72-54.

1.2 QUALITY ASSURANCE

A. All regulations by the above and other governing agencies in their most current version are applicable throughout this project. Where there is a conflict between this document and the cited federal, state, or local regulations or guidelines, the more restrictive or stringent requirements shall prevail. This section refers to many requirements found in these references, but in no way is it intended to cite or reiterate all provisions therein or elsewhere. It is always the Contractor's responsibility to always and in all ways know, understand, and abide by all such regulations, statutes, ordinances, guidelines, and appropriate/common industry practices.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01302 - SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

A. Submittals described in Part 3 - Execution will be required to be completed by the Contractor. Contractor is advised that other Submittal requirements may also be found within each specific and individual specification Section.

B. Submittals shall be submitted with multiple copies as noted at the times indicated.

C. Failure to provide any submittal will not release the Contractor from any submittal requirement.

D. Receipt of any submittal by a LSKCK representative shall not be construed to mean an acceptance, nor approval, of that submittal.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 SUBMITTALS

A. Submittal with LSKCK Application

The Contractor shall submit one copy of the following qualifications with the bid form(s):

1. A list of a minimum of five references of persons or entities who can attest to the quality of work performed by the Contractor. Individual names, addresses and contact telephone numbers must be provided.

2. Submit evidence of the successful completion of KDHE/EPA approved training course(s) covering lead-based paint abatement for all proposed Workers and all proposed Supervisors. The training shall be a minimum 24hr-training period for workers and 40hr training for supervisors.

3. Demonstrate experience in performing previous lead-based paint abatement

projects. Submit a list of at least three (3) prior lead-based paint abatement contracts including the names, addresses, and telephone numbers of building Owner's for whom the projects were performed. In rare circumstances, inexperienced contractors may be qualified if they can demonstrate exceptional qualifications in other contractor standards and abilities. Submit construction project information about other type of construction experience if projects relating to lead-based paint abatement are not available.

4. Submit copies of KDHE certifications/licenses for all abatement workers and all abatement supervisors who will be on-site, at any time, during all hazard control/abatement operations. All hazard control/abatement personnel will be required to show immediate proof of KDHE certification at all times that any hazard control/abatement/construction personnel is on-site. At least one (1) lead abatement supervisor will be required to be on-site at all times, at least during the conduct of any set-up, abatement and clean-up work.

5. Submit copies of Lead Activity Firm licenses for all firms that will perform any work on any LSKCK funded property.

6. Provide a description of any lead-based paint abatement project or other type of construction project which was prematurely terminated, including the circumstances surrounding the termination, provide the name of the project, the Owner's name, the Owner's representative name, and the Owner's address and telephone number. If none, provide a signed statement indicating "none".

7. Provide a list of any contractual penalties that the Contractor has paid for the breach or noncompliance with the contract specifications, such as overruns of completion time or liquidated damages. Provide the name of the project, the Owner's representative, the Owner, the address of the Owner, and the Owner's telephone number. If none, provide a signed statement indicating "none".

8. Submit information about any citation levied against the Contractor by any federal, state, or local government agencies for violations related to lead-based paint abatement, identify the name or location of the project, the date(s), details of the citations, and how the allegations were resolved. Submit the name of the agency that wrote the violation, the name of the person in the agency most familiar with the circumstances of the violation, the address and the telephone number of the agency. If no violations, provide a signed statement indicating "none".

8. Submit a description detailing all legal proceedings, lawsuits or claims that have been filed or levied against the Contracting firm or the Owner of the firm for lead-based paint abatement. Submit applicable names, addresses, and telephone numbers.

9. Provide evidence that the Contractor has been in business a minimum of two (2) years. This requirement may be waived if the Contractor can demonstrate that he/she has exceptional construction trades experience.

10. Provide copies of all appropriate training certifications and licenses for all persons employed on this project, as required by this specification and other local, state, and/or federal regulations.

11. Provide signed copies of certificates of insurance that show that the Contractor has the insurance as required by LSKCK and Sections of these Specifications. Insurance types shall be at least in accordance with Section 01303 – Insurance, of this specification.

B. Pre-Work Submittals

1. The Contractor shall provide the required notification document as required by KDHE at least ten (10) days prior to commencement of work, refer to K.A.R 28-72-18 and outlined below.

    a. Proposed alternate heating and/or cooling system to be used (if any) at least five (5) days prior to work commencement.

C. Post-Abatement Submittals

The Contractor is required to submit the following to LSKCK after hazard control/abatement/construction completion:

1. Copies of the disposal manifests and receipts acknowledging disposal of all hazardous and non-hazardous waste material from the project, indicating transporter name, delivery date, quantity, and appropriate signature of receiving landfill's authorized representative (within a maximum of 30 days after job completion);

2. A notarized copy of the daily entry-exit/visitor logbook (within a maximum of 7 days after job completion); and,

3. Contractor must prepare and properly execute an Invoice for payment prepared by an Officer of the Contractor company, on Contractor letterhead, with the contract amount, any change orders (additions or deductions) and certifying to LSKCK that abatement or interim controls took place within and on the Owner's property, detailing the type of abatement or interim control action that took place for each and every surface, component, item, and/or substrate addressed, in every room or area of the property (within a maximum of 7 days after job completion).

4. The Change Order Form must be completed and approved by LSKCK staff prior to Invoice submittal.

5. For each dwelling unit, the Supervisor or Project Designer for the Contractor company must prepare and properly submit a post-abatement clearance report, on Contractor letterhead, certifying that all hazard control/abatement/construction work was performed and completed in compliance with all applicable federal, state, and local regulations, and the project achieved clearance within 20 business days to KDHE. LSKCK will provide the owner a copy of the post-abatement clearance report.

END OF SECTION

SECTION 01303 - INSURANCE

PART 1 - GENERAL

1.1 SUMMARY

A. Provide Insurance for the lead hazard control/abatement and construction project; the following types and dollar amounts.

1. Comprehensive general liability: $ 1,000,000.00 per occurrence.

2. Commercial automobile liability (including hired/non-owned): $ 1,000,000.00 per occurrence.

3. Workmen's compensation: as required by Federal, Local and State worker's compensation and occupational disease laws.

4. Pollution Liability coverage: $ 1,000,000.00 per occurrence.

5. Professional Liability/Errors and Omissions: $1,000,000.00 per occurrence.

6. Other insurance types as may be required by Federal, Local or State law.

B. The Contractor shall, at its own expense, provide and maintain during the entire performance period of this contract at least the kinds and minimum amounts of insurance required in the above Schedule or elsewhere in this specification or as indicated in the “front end” portions of the contract documents.

C. Prior to commencing work under this contract, and as required under Section 01302 - "Submittals", the Contractor shall certify to the Owner in writing that the required insurance has been obtained and is in-place The policies evidencing required insurance shall contain an original endorsement to the effect that any cancellation or any material change adversely affecting the Owner’s or the LSKCK project interest shall not be effective (1) for such period as the laws of the State of Kansas prescribe or (2) until 30 days after the insurer or the Contractor gives written notice to the Owner, whichever period is longer.

D. The Contractor shall insert the substance of this Section clause, including this paragraph (D), in subcontracts under this contract that require work by subcontractors and shall require subcontractors to provide and maintain the insurance required in the Schedule or

elsewhere in the specifications or contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the LSKCK Representative upon request.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01421 - PROJECT CLEARANCE

PART 1 - GENERAL

1.1 SUMMARY

A. Maintain records regarding all exposure monitoring air sampling and all medical monitoring physical examination in accordance with the Occupational Safety and Health Administration (OSHA) requirements. At a minimum, the Contractor shall meet all record keeping requirements of 29 CFR 1926.62 and 29 CFR 1910.20.

B. Related Work

1. Documents affecting the work of this section include, but are not necessarily limited to General Conditions, Supplementary Conditions, Attachment A, all Sections in all Divisions of this specification and as shown on the drawings (if provided).

2. Decontamination of all personnel leaving the containment area.

3. Decontamination of Equipment, Tools, Containerized waste and all other items leaving the Work/Containment Area.

4. Decontamination of the Containment work area to prepare it for Project Clearance.

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills, crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this specification.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 MONITORING, INSPECTION, AND TESTING

A. Personal and Area Air Sampling

1. Personal air sampling (OSHA required monitoring) activities must be conducted by the Contractor or his duly authorized representative during any lead-based paint hazard control work or any other work involving lead containing materials. The results of such sampling shall be posted, provided to individual workers within the 5-day OSHA required timeframe. Contractor must ensure analytical result receipt no later than 3 calendar days after sample collection.

2. The Contractor's air sample testing lab shall be a completely and totally independent third party firm and shall be a successful participant in the National Lead Laboratory Accreditation Program (NLLAP). Air sample collection and analyses shall at least meet the intent of NIOSH Method 7082.

3. Personal air samples shall be taken so as to at least meet the requirements of OSHA. Personal air samples must also be taken every time there is a change in the hazard control operation, either in terms of the type of work, method of hazard control, method of engineering control/work practice control/administrative control, or other change in the hazard control process that might affect the worker’s exposure to lead. Sampling will be used to determine eight-hour Time-Weighted Averages (TWA). Personal air sampling will be conducted as outlined in NIOSH Method 7082 and OSHA Standard 29 CFR 1926.62. Among other considerations, the laboratory results of the air sampling will determine the need for medical monitoring, the need for and the types of PPE required, the degree of respiratory protection and decontamination required, subject to the regulations. It will also help determine other safety requirements for the workers, as well as the engineering controls, work practice controls and administrative controls that are required. It will help evaluate the effectiveness of engineering controls, work practice controls, administrative controls and worker protection measures. All air sampling will be solely at the Contractor's expense.

4. Air sampling results shall be submitted to the LSKCK representative and individual workers available at the job site in written form no more than 5 days after the completion of a sampling cycle. The reporting document shall list each sample's result, sampling time and date, personnel's name who were monitored and their social security number, flow rate, cassette size, analysts' name, task involved, laboratory name and laboratory’s NLLAP accreditation number, certificate copy. The document shall include an interpretation of the results. All air sample analysis results shall be reported in $\mu g/m^3$.

5. Air Monitoring Frequency. The air monitoring frequency for Contractor operations shall at least be established in accordance with the requirements set forth in 29 CFR 1926.62.

6. At the sole discretion of the LSKCK representative, additional samples may be collected from workers (non-OSHA compliance) inside and outside containment (or work area). The Contractor shall extend full cooperation to the LSKCK representative conducting air sampling. This discretionary additional sampling and analyses shall be at LSKCK's expense.

B. Inspections

LSKCK staff will conduct various inspections of the lead work area, hazard control practices and workmanship/craftmenship.

4. Final Clearance Sampling - Final clearance sampling will not occur until all surfaces are completely dry. LSKCK or LSKCK's Consultant will perform final clearance wipe testing after final clean-up activities are completed and surfaces have been properly sealed with appropriate approved materials for the substrate. Contractor must keep the LSKCK constantly updated, as to the units and/or building areas that have received final clean up and are ready for final clearance wipe sampling. The Contractor shall notify the LSKCK at least 48 hours in advance of the need for clearance wipe sampling.

5. A final punch list inspection is also required after all work is completely installed, finished, waxed, sealed, painted, and/or cleaned.

C. Dust Lead Wipe Clearance Sampling

1. At the sole discretion of LSKCK, the following Clearance Wipe Tests **may be taken in the numbers and areas shown**, after the final cleaning phase has been completed and the Contractor has requested that Clearance Dusts Wipes be taken. Numbers and locations of clearance wipe samples will be at the sole discretion of the Certified Risk Assessor.

Type of Hazard Control Procedure	Possible Number and Location of Wipe Samples
On-site paint removal throughout the dwelling unit or building area	At least 3 wipe samples in each room* abated (if windows are present; otherwise at least one sample for each room): 1 window trough (well); 1 window sill; and, 1 floor.
On-site paint removal in limited areas of living unit or building	At least 3 wipe samples in each room* abated (if windows are present; otherwise at least one sample for floor): 1 window trough (well); 1 window sill; 1 floor; and, 1 sample outside the containment area (within 10 feet) in 20% of the abated units
Replacement, interim controls, enclosure and/or encapsulation only throughout the living unit or building area	At least 1 wipe sample in each abated room*, divided between window troughs (wells), window sills, and floors (if windows are present; otherwise at least one sample from floor areas)
Replacement, interim controls, enclosure and/or encapsulation only in limited areas of living unit or building area	At least 1 wipe sample in each abated room*, divided between window troughs (wells), window sills, and floors (if windows are present; otherwise at least one sample from floor areas) AND 1 sample outside the containment area (within 10 feet)
Type of Hazard Control Procedure	**Possible Number and Location of Wipe Samples**
Exterior lead-based paint hazard control/interim controls, Exterior dust hazard control and/or Soil hazard control	At least 1 wipe test on each exterior horizontal walking surface. LSKCK may also elect to collect and analyze post hazard control wipe samples to determine if soil lead hazards exist after completion of any and all hazard control and/or construction work efforts.

NOTE: Other areas and surfaces may also have wipe samples taken, at the sole discretion of LSKCK, to

help determine the quality and cleanliness of the Contractor's work.

2. Clearance Standards. The standards for passing a clearance wipe test are:

Floors:	less than 40 micrograms of lead per square foot ($< 40\ \mu g/ft^2$)
Window sills/stools:	$< 250\ \mu g/ft^2$
Window troughs:	$< 400\ \mu g/ft^2$
Exterior horizontal surfaces: (HUD Guidance)	$< 400\ \mu g/ft^2$

3. Retests and Associated Costs. Should laboratory results indicate that the wipe test clearance level is exceeded, the Contractor shall re-clean the affected area, at no additional cost to LSKCK or to the Owner, utilizing the procedures specified previously (i.e., HEPA vacuum, wet wash with lead sequestering/removal detergent, clean water rinse, and HEPA vacuum). Retesting will then be performed once the Contractor has notified LSKCK in writing that re-cleaning has been completed and the work area is ready for retesting. Contractor shall pay for all additional testing and provide, at no additional cost, for re-cleaning of effected area until the clearance level is achieved. A fee of $100.00 (per failed clearance test) shall be deducted from the contractor's contracted amount. The Contractor shall also be financially responsible for all ancillary costs associated with time delays of the project, including, but not limited to liquidated damages, relocation costs, etc. All costs as indicated above shall be deducted in a deduct change order from the Contractor's contract amount.

END OF SECTION

SECTION 01504 - TEMPORARY FACILITIES

PART 1 - GENERAL

1.1 SUMMARY

A. The Contractor shall confine operations at the site to the areas permitted under the contract, or as otherwise allowed by LSKCK. All other areas shall not be disturbed, entered or contaminated as a result of Contractor's work effort, in any way or to any degree. All site rules and regulations shall be strictly followed throughout the entire duration of the project.

B. Related Work

1. Documents affecting the work of this section include, but are not necessarily limited to General Conditions, Supplementary Conditions, Attachment A, all Sections in all Divisions of this specification, and as shown on the drawings (if provided).

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

1.3 PROJECT/SITE CONDITIONS

A. The Contractor may be provided with area(s) as selected by the Owner and/or LSKCK for use as on-site operations.

1. The Contractor shall, at Contractor's sole expense, provide all sanitary facilities, all break areas and all lunch areas, as necessary, in accordance with all applicable regulations. The sanitary facilities shall be kept clean, non-contaminated, properly functional, sanitary, and in working condition at all times during the project. Contractor shall comply with all OSHA regulations regarding sanitary facilities.

B. The Contractor shall keep all streets and entrances serving the premises clear and available to the Owner, residents, and the general public during the project. All deliveries shall be scheduled to minimize space and time requirements for storage of materials and equipment on the site.

C. Contractor's vehicles shall not be allowed on lawns (except for emergencies), unless approved by the Owner in writing. If the Contractor's vehicles or work activities damage any lawn areas, driveways or sidewalks, the Contractor shall pay all costs associated with returning the damaged areas to original or better condition, based upon the determination of LSKCK, at no additional cost to the Owner or LSKCK. This shall include breaking out the damaged areas and re-pouring new concrete in accordance with American Concrete Institute (ACI) standards, as well as re-grading and new grass stands as necessary, to the Owner's and/or LSKCK's complete satisfaction. The Contractor shall guarantee viability of new concrete and/or grass stands for a minimum period of at least one (1) year.

D. Contractor shall place the hazardous and non-hazardous waste disposal dumpsters in an area approved by LSKCK and/or the Owner or as described in this specification.

E. Adjacent structure(s) will be occupied during the entire hazard control/construction period. The Contractor shall cooperate with the Owner and all other parties during the Project operations to minimize conflicts. Work shall be performed so as not to interfere with the Owner's and/or adjacent occupant's operations.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Materials may be stockpiled in an area of the site as instructed by the Owner and/or the LSKCK Representative. The Contractor shall assume all responsibility and liability for the security, for the storage, and for the safety of all items stored, per all manufacturers' recommendations.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01506 - WORK AREA CONTAINMENT

PART 1 - GENERAL

1.1 SUMMARY

All interior lead-based paint (LBP) hazard control/hazard control (physical removal, enclosure, encapsulation, removal and replacement, chemical stripping, paint film stabilization, covering with vinyl or metal, interim controls, etc.) requires the use of full work area containment. Exterior LBP hazard control/hazard control work efforts may not require the use of full containment. Specific work area containment requirements are included in the individual section addressing each hazard control/hazard control alternative.

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

B. Product Data:

1. Materials list of each and every item proposed to be provided under this Section;

2. All Manufacturer's specifications and other data needed to prove compliance with the specified requirements;

3. Shop drawings in sufficient detail to show all fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades;

4. Manufacturer’s full package of all warranty information, including, but not limited to, warranty period and considerations that would void a warranty; and,

5. All Manufacturer's recommended installation, application or use procedures, which, when approved by the Owner and/or the LSKCK Representative, will become the basis for accepting or rejecting actual installation, application, or use procedures used on the Work.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills, crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance

of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. All materials shall be delivered to the project site in their original cartons or packing. All materials shall be stored in a safe, secured, climate controlled, humidity controlled, and dry area. Heat and/or air conditioning shall be provided for all materials affected by cold or hot weather. All materials shall be stored in such a manner so as to ensure that the materials are safe, secure and will not in any way be negatively impacted in any way by way of delivery, handling or storage.

PART 2 - PRODUCTS

2.1 Materials

A. The following non-inclusive list of materials, as well as others as may be necessary, will be considered for use on hazard control work area containments:

1. Polyethylene sheeting - 6-mil thick for covering non-removable items, floors, for critical barriers, airlocks, for construction barriers and wrapping objects too large to place into 6-mil thick waste disposal bags. Opaque polyethylene shall be used for barriers on public side of containment enclosures. Nylon, polyester, or fiberglass reinforced polyethylene sheeting shall be used where required for outdoor barriers. Fire retardant polyethylene shall be used where any potential for fire exists.

2. Plywood – minimum 1/2" thickness, for Security and containment barrier. CDX plywood shall be used.

3. Work clothing - As a minimum, disposable coveralls (Tyvek™, Saranex™, Polypropylene, etc.) with attached hoods and booties; latex, rubber, and/or leather gloves, per manufacturer's MSDS (as needed to ensure the protection of persons performing any type of construction and/or hazard control work); and rubber boots or boot covers. All clothing shall be of a quality that disallows exposure to any environmental and/or chemical hazards. If using chemical strippers, work clothing shall be chemical resistant, or as recommended by chemical stripping agent product manufacturer.

4. Respiratory protection equipment – When air concentrations meet or exceed the OSHA Permissible Exposure Limit (PEL) for any Contractor task, among other

requirements, all Contractor staff performing that task and all Contractor staff within respirable range of that task must wear an appropriate OSHA and/or NISOH approved respirator and appropriate filter cartridges. Disposable single use respirators are not acceptable.
A half-mask air-purifying respirator equipped with HEPA and/or Organic Vapor cartridges (depending upon the type and degree of hazard involved, per applicable OSHA regulations) shall be utilized to provide the required amount of protection. If these respirators do not provide adequate protection, as determined by 29 CFR 1926.62 or 29 CFR 1910.134, the Contractor shall provide powered air-purifying respirators, full-face respirators, or supplied air systems, as necessary to fully comply with the applicable OSHA requirements. Supplied air systems shall supply Grade D air conforming to 29 CFR 1910.134.

5. Signs and labels – **AT ALL TIMES**, provide OSHA and KDHE illuminated notification signs which are visible from all angles of approach to the properties, which include the phrase "Warning - Lead Work Area - Poison - No Smoking or Eating", in bold lettering at least two inches high and plainly visible from a distance of at least 15 feet. Regulated area caution and warning signs and barrier tape indicating "Authorized Personnel Only", without reference to lead-based paint, are also required to restrict access to authorized personnel only. This regulated area shall extend at least 20 out from the foundation wall of the structure, in all directions, as space permits.

6. Duct tape, blue tape, green tape, masking tape, adhesives and/or fasteners for polyethylene, plywood, disposal bags, and drums.

7. Filters – Organic vapor filters, HEPA filters and/or pre-filters for ventilation units, respirators, vacuums, and water filtration.

8. Wet wash solution - Solution containing a 5 percent solution of TSP or a non-TSP lead removal detergent (e.g. LEDIZOLV or equivalent), mixed according to manufacturer's recommendations.

9. Waste disposal bags - 6-mil thick polyethylene bags shall be used for the proper disposal of all applicable waste.

10. Steel drums - 55 gallon size which are resistant to chemicals for proper disposal and/or temporary storage of liquids.

11. Disposal Container - Roll-off dumpsters which are lined with a minimum of two

layers of 6-mil polyethylene sheeting. Dumpster shall have solid tops, sides and end, and must be able to be completely secured from any unauthorized entry/access (e.g., lockable).

12. Fiber drums – 55 gallon size for disposal of sharp and pointed objects.

13. Towels - Disposable towels for drying after personal decontamination.

14. Soap - Adequate supplies of soap for showering and personal decontamination shall be immediately available at all times during the project.

15. Hand and Face Wash Facility – A properly operational hand and face washing facility meeting OSHA requirements must be on-site and ready available for use at all times.

2.2 Equipment

A. The following non-inclusive list of equipment shall be considered for use on hazard control work area containments:

1. Electrical power - Ground wire equipped extension cords without splices. A sufficient number of Ground Fault Circuit Interrupter (GFCI) units to protect all personnel and all electrical equipment on the Project Site.

2. HEPA vacuum(s) - The Contractor shall provide HEPA vacuums for personal and equipment decontamination, prior to removal of waste/debris from a building, and for hazard control project site clean up before, during and after hazard control.

3. Ladders and scaffolding - A sufficient number of OSHA approved and properly used and maintained ladders, scaffolds, platforms, and walkways for use during preparation, removal, inspections, and cleanup shall be provided by the Contractor. If scaffolding is used, Contractor must have a Scaffolding Competent person, as required by OSHA regulations. All ladders and all scaffolding must be setup, used and removed in accordance with all applicable OSHA regulations.

4. Lighting - The Contractor shall supply a sufficient number of portable lighting units to provide adequate illumination (in compliance with all OSHA requirements) at all locations within the work areas.

5. Carts - Constructed of opaque materials with a secure fitting lid used for

transporting filled disposal bags from Load Out to temporary disposal storage facilities.

6. Cleanup equipment - The Contractor shall provide an adequate number of mops, rags, shovels, buckets, brushes, vehicle mounted broom and/or vacuum devices, spray washers, etc. to clean up soil, lead debris, exterior dusts, and water as removal and cleaning proceeds. At least one properly operational wet/dry HEPA-filtered vacuum cleaner shall be on-site at all times. Vacuums not HEPA-filtered and brooms are not permitted on-site.

7. Water sprayer - A water sprayer/mister (i.e., hand pump garden type, truck-mounted sprayer, etc.) to wet all dust and/or debris that is generated by the hazard control or associated work.

8. Fall Arrest Systems – Contractor shall have and use an adequate number of fall arrest systems to adequately protect all persons who work on any and all surfaces that will exceed six (6) feet off of the ground, in accordance with all OSHA requirements.

8. Other hazard control equipment - All other tools, equipment, materials, and accessories as may be necessary to complete the requirements of the Project, as required to at least meet all OSHA requirements, or as specified in these documents.

PART 3 - EXECUTION

3.1 CONTAINMENT BARRIERS AND COVERING OF WORK AREAS

3.1.1 General

Seal off the perimeter of the work area to completely isolate all construction and hazard control areas and to contain all airborne lead contamination created by any construction or hazard control work. Cover all surfaces of the hazard control work area not scheduled to be addressed to protect them from contamination, prevent contaminant migration, to facilitate more efficient clean-up, and to protect the finishes from the lead hazard control work activities. As a minimum, the work area shall be at least prepared and maintained in the following manner to begin and complete all lead-based paint hazard control work. The required preparations are presented in the approximate order in which they shall be completed on the lead hazard control project. These preparations and actions shall be used as appropriate and specified for the particular hazard control project.

3.1.2 Work Area Set-up (Interior Hazard control)

A. Pre-Hazard control

Prior to starting any work area set-up, LSKCK may take soil samples and dust wipe samples on each of these surfaces (i.e., exterior surfaces, interior floors, interior window sills, and window troughs [wells]) in the work area, building interior or exterior, or individual dwelling unit(s). The samples will be taken at LSKCK's expense.

B. Potentially Occupied Dwelling Units

The Contractor shall properly protect all itemized personal belongings of each dwelling unit occupant, so as to ensure that they will not become contaminated. The Contractor shall ensure that all furniture, equipment, and personal belongings from work areas are completely protected from all contaminates at all times.

1. All immoveable items must be removed from all work areas, if at all feasible, per the discretion of LSKCK. All immoveable furniture, equipment, personal items, or other items which will stay in the containment work area shall be completely covered with at least 2-mil polyethylene sheeting and sealed airtight and water tight. Any items that can be removed from any work area, shall be removed from all work areas.

2. Shutdown and/or seal off all heating, cooling, ventilating or other air handling systems serving the work area with 2 layers of 6-mil polyethylene sheeting. The environment of the work area shall be completely isolated from all other areas and all airflows.

3. Shutdown all electrical circuits which pose a potential hazard on the job. Exact electrical arrangements will be tailored to the particular space and systems involved. All electrical circuits serving the area or any equipment in the area will be turned off at the electrical box outside the containment or work area and locked, if possible, or taped shut with instructions indicating when power may be turned back on. A lock-out/tag-out program, in accordance with OSHA regulations, shall be implemented.

4. Close and secure all windows, doors, or other openings into the hazard control area. Allow entry only through the decontamination facility. Provide covers (critical barriers) over all windows, door and all other openings/penetrations

within the work area on the removal side with 6-mil polyethylene sheeting (Poly), duct taped or otherwise secured, so as to hold the Poly firmly and securely in place. The barriers shall be constructed of two layers of 6-mil Poly taped on all four sides completely covering the opening. Openings include, but are not limited to, vents, HVAC unit grilles/louvers/diffusers, windows, doors, drains, switch and receptacle plates, pipe runs/stand pipes, and areas around plumbing. These barriers shall be removed by the Contractor only upon acceptance of the work area (e.g., passing clearance wipe testing) by LSKCK. Work area shall have one layer of 6-mil polyethylene sheeting on all surfaces where indicated, except floors (which will have at least two layers), and areas where lead-based paint or lead-based painted items are to be controlled. In areas where containment separates a work area from a non-work area, install the 6-mil polyethylene wall plastic on 2" x 4" lumber at 16" o.c.

a. At LSKCK's approval, Contractor may utilize a portable mini-isolation chamber to create an isolated work area around single components to be removed. This chamber shall be equipped with an adjacent clean room, and become an isolated work area sealed at all seams where it is attached to adjacent surfaces. It shall satisfy all requirements for a work area and all clearance criteria shall be met, as identified in this specification manual.

5. Post OSHA and any other required warning signs on the opposite (clean side) of all sealed doorways. At a minimum, the signs shall be illuminated at night, visible from all angles of approach to the work area, shall be 20" wide by 16" high and shall read in minimum of 2" high letters, DANGER LEAD-BASED PAINT HAZARD CONTROL, DO NOT ENTER. The OSHA required sign shall read WARNING LEAD WORK AREA, POISON, NO SMOKING OR EATING.

6. In areas where there are occupied areas adjacent to and within view of the hazard control area, provide opaque polyethylene sheeting to create a physical and visual barrier.

7. In areas where the polyethylene on 2" x 4"s at 16" o.c. is the only separation between hazard control areas and occupied areas, construct physical (security) barriers with 2" x 4" lumber at 16" o.c. securely anchored to prevent movement and covered with at least 1/2" exterior grade plywood four feet outside (on clean side) of plastic containment barrier. At interior containment work area where physical (security) barriers are not used, install red barrier tape stating DO NOT ENTER WORK AREA or a similar message. Barrier tape shall be installed a

minimum of ten (10) feet outside of the containment wall (on the clean side). A warning sign shall be mounted on the plywood security barrier or the barrier tape stating AUTHORIZED PERSONNEL ONLY - DO NOT ENTER.

8. Work area shall be enclosed with a minimum of two layers of 6-mil Poly sheeting on the floor. The (minimum two) layers of floor Poly shall be individual layers of clear polyethylene sheeting, turned up walls at least 12 inches. Form a sharp right angle bends at junction of floor and wall so that there is no radius that could be stepped on causing the wall attachment to be pulled loose. If at all possible and without any damage whatsoever to any structural item or area, use spray-glue, staples, lathe, and/or duct tape on all seams and edges in floor covering. All floor Poly seams shall overlap a minimum of 18". Locate seams in top layer at least six feet from or at right angles to seams in bottom layer. Install sheeting so that top layer can be removed independently of any other layer. Cover carpeting (if it is not to be replaced) with at least three layers of polyethylene sheeting, minimum of 6-mil each in thickness. Place corrugated cardboard sheets between the top and middle layers of polyethylene. Properly and safely remove and secure all electrical and mechanical items such as lighting fixtures, clocks, diffusers, registers, escutcheon plates, etc., which cover or are attached to any part of the surface to be worked on.

9. Where stairs or ramps are covered with polyethylene sheeting, provide 1/4" exterior grade plywood treads securely held in place, over polyethylene. Do not cover stairs or ramps with unsecured polyethylene sheeting. Do not cover ladder rungs or rails with any type of protective materials.

10. If the containment barrier is breached in any manner that could allow the passage of lead dust or debris, then where possible, add affected area to the work area. Isolate it as required and decontaminate it. If contaminated area cannot be added to the work area, decontamination measures shall start immediately after contamination is discovered and all hazard control and other work shall stop in the work area until the contaminated area is declared uncontaminated. Decontamination procedures consisting of HEPA vacuuming, wet misting, detergent washing, clean water wet rinsing/wiping, and HEPA vacuuming.

11. A top floor layer of 6-mil polyethylene sheeting shall be used as a drop cloth on the floor to protect the primary layers of floor poly from dust and debris generated by the hazard control process in the work area. The secondary barrier shall be taken up and replaced as necessary to assist with daily clean up.

12. The Contractor shall establish emergency exits from the hazard control containment area. All emergency exits shall be equipped with two (2) full sets of protected and clean protective clothing at all times. Emergency exits shall be clearly marked with red duct tape (or other similar and approved method) arrows showing the direction of exit. All exits shall have a utility knife attached by hanging from a string on the interior of the containment where seals or polyethylene must be cut or broken to exit.

13. The Contractor shall provide an adequate number of HEPA-filtered exhaust units to ensure a minimum of one (1) complete air exchange in the containment area every 12 minutes (if specified or used by Contractor).

14. Whenever any one of any and all Contractor tasks meets or exceeds the OSHA Permissible Exposure Limit (PEL), a properly functional and operational decontamination shower facilities must be used by all Contractor staff on-site. The decontamination facility shall serve as the entrance and exit for all persons entering the containment area. The decontamination facility shall have all walls and ceilings constructed air tight with at least one layer of 6-mil polyethylene sheeting attached to existing building components or to a temporary framework made of 2" x 4"s at 16" on-center (o.c.). The 6-mil poly wall shall be mechanically supported and sealed with duct tape, staples, spray-glue, or other approved manner to ensure that poly sheeting is securely supported. Tape all joints including joining with the floor covering with duct tape. Use a minimum of two layers of 6-mil polyethylene sheeting to cover the floor under the decontamination facility. Construct doors from overlapping polyethylene sheets so that they overlap adjacent surfaces. Weigh sheets at bottom so that they quickly close after release. Put arrows with duct tape on polyethylene sheet doorways/airlocks showing direction of overlap and travel. If building is partially occupied, construct a solid, securely attached barrier with at least 1/2" CDX plywood sheeting on 2" x 4" s at 16" o.c. on the public side (a minimum of 4' from the containment wall) to protect the polyethylene sheeting and to physically separate the containment from any occupied area. The plywood security barrier shall have a plywood door which is reinforced by 2" x 4"s and hinged with a padlock hasp or other acceptable lock.

    a. Construct the decontamination unit with a series of connecting rooms starting with the change room at the clean (non-work) area, air lock, with a shower room in between air locks and the equipment room on the "dirty" (work) area side. Provide an adequately sized decontamination facility to accommodate the number of personnel scheduled for the project. The

center shower chamber of the five chambers shall be fitted with as many portable walk through shower stalls so that all personnel will be able to go through the entire decontamination procedures within 15 minutes. The decontamination facility should be constructed of opaque or colored polyethylene sheeting, or other necessary means, if required for privacy. Construction shall be such that it will not allow for any Contractor staff to exit without decontamination showering.

b. The changing room (clean) of the decontamination facility should be physically and visually separated from the rest of the building for the purpose of personnel changing into protective clothing, as well as dressing into/undressing out of street clothing. Construct the change room using 6-mil minimum thickness polyethylene sheeting to provide an airtight room. Provide a minimum of two, three feet wide flapped doorways entering the change room. Doorways shall be constructed from polyethylene sheeting; one door way shall be accessible from the outside and one from the "airlock". Keep all areas of the change room dry, clean and free of all contaminants at all times. Do not allow any water or contaminant overflow from the shower into the room. Damp wipe and decontaminate all surfaces with a lead sequestering detergent twice after each shift change. The change room shall be supplied with an adequate supply of personnel decontamination cleansers, disposable bath towels and disposable protective clothing as required for two days use at all times. Provide one storage locker per worker and supervisor and three extra for the LSKCK Representative and benches for persons that are changing to sit on. Eighteen (18) inches of bench per person shall be provided. Provide a portable type 20 pound "ABC" fire extinguisher in the change room as per NFPA Standard 10. The entry into the change room from the "clean" or non-containment area shall be posted with all required KDHE, EPA, OSHA, and other federal, state, and local warning signs, including a warning sign which states in 2" high bold letters the following: "CAUTION, LEAD HAZARD DO NOT ENTER WORK AREA UNLESS AUTHORIZED", and the OSHA, " WARNING-LEAD WORK AREA- POISON-NO SMOKING OR EATING."

c. The shower room of the decontamination facility shall provide a completely water tight operational compartment to be used for transit of all persons entering the work area from the change room, or for decontamination showering by all persons headed out of the work area after undressing in the equipment/dirty room. Construct each stall and

shower wall so that water running down the walls will drip into a watertight pan. Install a free draining, smooth, wooden or easily cleaned additional floor on top of the shower pan. Separate this “room” from the rest of the dwelling unit and the adjacent decontamination facility’s dirty and change rooms, with air tight walls and "air lock" chambers at least 3' wide, fabricated of 6-mil polyethylene sheeting. Provide temporary water service connection to the shower chamber of the decontamination facility. Provide backflow protection at the point of connection to the building water system. Provide UL rated 40-gallon electric water heater to supply hot water at a minimum of 105°F to the showers. Provide as many 40-gallon water heaters as necessary for a complete work shift to shower with an adequate supply of hot water within 15 minutes. Provide splash proof entrances to all "air lock" chambers. All wastewater from showers shall be filtered before draining any potentially contaminated liquids, as per the requirements of the local Publicly Owned Treatment works (POTW). All waste and wash water shall be pumped to an appropriate container (e.g., 55 gallon drum, etc.) and provide a 20 micron and 3 micron wastewater filters (or other appropriate micron size filters, so as to at least meet the more stringent of EPA or POTW water disposal requirements) in line to appropriate container. Locate filters inside shower so that water lost during filter change drains into shower pan. Shower rooms may be arranged as follows:

i. At entrance to the shower room, construct doorframe from 2" x 4" lumber with 1-1/2" jambs and 1-1/2" header and sill. Attach to the frame of two overlapping flaps of heavy rubber roofing material (minimum of 1/32" thickness), securely fastened at the header and the jambs. Overlap flaps at 6" in a direction that presents a shingle-like configuration to the water stream from the shower. Overlap shower stall sill by 1-1/2" minimum. Arrange so that any air movement from the work area will cause the flaps to seal against the doorframe. At 6" toward shower from each entrance to the shower room, construct a second 2" x 4" door header. Attach to this header a one piece flap of at least 1/32" rubber roofing material fastened at the top, overlapping onto each side of the shower unit by 1-1/2" minimum and stopping 1" clear of floor. Provide shower heads and controls, temporary cold and hot water and drainage, soap dish, and continuous supply of personal decontamination soap, and paper bath towels. Maintain sanitary and non-contaminated conditions at all times. Arrange all controls

so that a single individual can shower without assistance.

d. The dirty or equipment room of the containment facility shall provide a completely airtight compartment to be used to store work equipment, reusable footwear and warm clothing and as a transitional change station. Separate this room from the shower area by a minimum of two 3' wide doorways at each end of a 3' minimum wide "air lock" room with two separate overlapping flaps of 6-mil polyethylene sheeting at the door to the equipment room. The door nearest the shower shall be constructed as indicated in 3.1.2.P.3.a. Separate this room from the shower room, the work area, and other rooms with airtight walls and ceilings constructed of minimum 6-mil polyethylene sheeting. When necessary, provide a temporary electrical sub panel in the equipment room to accommodate any power tools and equipment in the work area. Provide benches for workers to sit on. The shower room shall be separated from the dirty room and clean room with a minimum 3' deep (polyethylene sheeting "airlock" room) that is constructed of 6-mil and has 3' wide doorways.

e. If required to meet all applicable OSHA requirements, decontamination facilities shall remain operable from the time hazard control operations begin (including any setup activities) until completion and passing of final dust wipe sampling.

15. Load Out - An area through which material and equipment are passed through into the Removal area, and through which non-contaminated bags of waste and non-contaminated tools and equipment are passed through to the outside from the Removal Area. The load out area may be constructed as a separate area (other than using the decontamination facility) if approved by the LSKCK Representative. The load out room shall be constructed with 6-mil polyethylene sheeting on 2" x 4"s at 16" o.c.. The load out shall be a minimum of 3' wide and have an "airlock" between it and the outside. The "airlock" shall have be a minimum of 3' wide and have a door constructed in accordance with applicable portions of 3.1.2. of this section at the outside and at the load out room. The load out room shall have doors constructed in accordance with applicable portions of 3.1.2. of this section at both ends of the room. The load out and the "airlock" shall have two layers of 6-mil polyethylene sheeting on the floor installed in accordance with applicable portions of 3.1.2. of this section. Remove and replace the top layer of polyethylene as lead contaminated waste daily at the end of each work shift.

3.1.3 Exterior Work Areas

Work area containment set-up for the hazard control of exterior building items such as gable ends, soffits, porch ceilings, porch columns, railings, stair rails, fascia boards, siding, windows, and doors or other exterior components shall, at a minimum, consist of 2 layers of 6-mil polyethylene sheeting (poly) placed on the ground at least ten (10) feet in all directions of the hazard control area, or as otherwise required by LSKCK. The building side (inside) of the ground poly shall extend at least 18” up the foundation wall. The outside ends of the ground poly shall be turned up at the edge at least 6" and securely supported with wood stakes to help prevent debris from being spread beyond the poly and the work area. The poly shall be secured at 6 foot on center minimum to prevent it from moving or blowing; additional attachment shall be added as necessary to prevent movement. Seams shall be overlapped a minimum of 18", glued, and taped continuous. All exterior hazard control operations must stop if continued wind speeds exceed 10 MPH.

a. No containment walls shall be required for the hazard control of the exterior items unless wind speeds exceed 10 MPH or if wind conditions have any potential to disperse debris beyond the polyethylene sheeting on the ground. If the wind speeds exceed 10 MPH or if wind disperses paint debris, the Contractor’s hazard control operations shall immediately stop and all debris shall be immediately and properly cleaned up, until the wind reduces in velocity, as approved by the LSKCK Representative. The Contractor shall HEPA vacuum all ground areas to remove all visible debris that is dispersed beyond the 6-mil polyethylene ground cover. The Contractor shall clean by HEPA vacuum at the end of each day and at other times as necessary during hazard control to prevent paint chips and debris from being spread beyond the ground cover sheeting. All exterior ground Poly shall be properly removed and disposed of each day.

b. Contractor shall establish a regulated area in accordance with Wyandotte County, KDHE and/or EPA work practice standards and all applicable regulatory requirements. Barrier tape, fencing, or other appropriate means to deny the general public and access to the regulated area, shall be placed at a distance of at least 20’ from dwelling units foundation wall (if space allows), outside all exterior hazard control areas on all sides, so as to prevent unauthorized entry into the hazard control regulated area. OSHA and KDHE lead hazard control signs and other federal, state, or local warning signs shall be mounted on the physical and visible barriers of the regulated area.

END OF SECTION

SECTION 01510 - HEPA FILTERED VENTILATION SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. If the OSHA Permissible Exposure Limit (PEL) is met or exceeded for any one of any of the Contractor's tasks, the Contractor may wish to consider the use of a HEPA Filtered Ventilation system. If a HEPA Filtered Ventilation system is used, the HEPA filtered ventilation system must filter and exchange all of the containment air a minimum of five (5) times per hour. The ventilation system shall be exhausted to the outside unless approved otherwise by LSKCK.

B. Related Work

1. Documents affecting the work of this section include, but are not necessarily limited to General Conditions, Supplementary Conditions, Attachment A, Sections in all Divisions of this specification and as shown on the drawings (if provided).

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

B. Product Data

The Contractor shall provide to LSKCK, when requested by LSKCK, the following information before beginning hazard control, construction, or cleanup activity:

1. Materials list of items proposed to be provided under this Section;

2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements, including manufacturer's product data on the HEPA filtration units;

3. Manufacturer's recommended application or use procedures, which, when approved by LSKCK, will become the basis for accepting or rejecting actual application or use procedures used on the Work;

4. Provide a copy of the volume flow rate calculations and a layout sketch indicating

the locations of the filtration units to LSKCK for approval before beginning hazard control, construction, or cleanup activity;

5. Methods of supplying adequate power to the units and designation of electrical panels supplying power.

6. Description of testing methods used to establish correct airflow and pressure differential. Also provide manufacturer's product data on monitoring the pressure differential monitor associated with the air filtration unit.

7. Method of providing adequate auxiliary power supplies if existing power is not adequate or is in any way interrupted.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills, crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this specification.

1.4 DELIVERY, STORAGE, AND HANDLING

A. All materials or equipment shall be delivered to the project site in their original cartons or packing. All materials or equipment shall be stored in a safe, temperature controlled, secured, dry area. Heat and/or Air Conditioning shall be provided for all materials or equipment affected by cold or hot temperature conditions.

1.5 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident’s operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

PART 2 - PRODUCTS

2.1 Materials

A. The following non-inclusive list of materials, as well as others not specifically mentioned, will be considered for use on LSKCK hazard control projects:

1. Polyethylene sheeting - 6-mil thick for covering non-removable items, floors, walls, ceilings, for construction barriers and wrapping objects too large to place into waste disposal bags. Opaque polyethylene shall be used for barriers on public side of enclosures. Nylon, polyester, or fiberglass reinforced polyethylene sheeting shall be used where required for outdoor barriers. Fire retardant polyethylene shall be used where the potential for fire exists.

2. Plywood – at least 1/2" thick CDX plywood shall be used. for Security and containment barrier.

3. Duct tape, blue tape, green tape, masking tape, adhesive, and fasteners for polyethylene, plywood, disposal bags, and drums.

4. Filters - HEPA filters and pre-filters for ventilation units, vacuums, and water filtration.

2.2 Equipment

A. The following non-inclusive equipment, as well as others not specifically mentioned, shall be considered for use on LBP hazard control projects:

1. Electrical power - Ground wire equipped extension cords without splices. A sufficient number of GFCIs to properly protect all personnel and electrical equipment inside the Removal Area.

2. HEPA vacuum(s) - The Contractor shall provide HEPA vacuums for personal decontamination, clean-up, and for hazard control project site clean-up before, during and after hazard control.

3. Ladders and scaffolding - A sufficient number of OSHA approved and properly used and maintained ladders, scaffolds, platforms, and walkways for use during preparation, removal, inspections, and cleanup shall be provided by the

Contractor.

4. Lighting - The Contractor shall supply a sufficient number of portable lighting units to provide adequate illumination (in compliance with all OSHA requirements) at all locations within the work areas.

5. HEPA filtration units - Provide a sufficient number of HEPA filtration units as described in Part 3 - Execution of this section, as well as other Sections of these specifications.

6. Other hazard control equipment - All other tools, equipment, and accessories as may be necessary to complete the requirements of the project, as specified in these documents, and required by local, state, and federal requirements and/or guidelines, in a safe, efficient, professional, and workmanlike manner, in accordance with all applicable standard industry practices.

PART 3 - EXECUTION

A. General

The Contractor shall demonstrate the number of air filtration units needed per work area, so as to be able to achieve at least five (5) room air changes per hour by calculating the volume flow in cubic feet per minute (cfm) delivered by each unit under 2" pressure drop across the filters. When a pressure differential system is selected, provide enough HEPA filtration units to filter and re-circulate the air in the work area at a minimum rate of five (5) room air changes per hour.

B. Location of HEPA Filtration Devices

The HEPA filtration devices shall be located so that air entering the work area will be through a supplemental air make-up inlet or the decontamination facility and the air exhausting the unit shall be exhausted directly to the outside. Unless written authorization from LSKCK is given, ventilation devices shall exhaust air outside the building, using flexible ducts if necessary. Make-up air shall be provided through the Decontamination Facility (if required by OSHA and/or the Specifications), maintaining airflow inward through these areas at all times. If additional make-up air is required, a flapped vent may be constructed with the approval of LSKCK.

C. Filter Requirements

Each filter provided in the ventilation devices shall be a HEPA filter that is individually tested

and certified by the manufacturer to have an efficiency of not less than 99.97% when challenged with 0.3 µm dioctylphthalate (DOP) particles. Testing shall be in accordance with Military Standard MIL-STD-282, Army Instruction Manual 135-300-175A or other LSKCK approved equal. Each filter shall bear a UL586 label to indicate ability to perform under specified conditions.

1. Each filter shall be marked with the name of the manufacturer, serial number, airflow rating, efficiency and resistance, and the direction of test airflow.

D. Filter Stages

HEPA filtered ventilation units shall have pre-filters which protect the final filter by removing the larger particles. A minimum of two stages of pre-filtration are required. First-stage pre-filter shall be a low-efficiency type (i.e., for particles 10 µm and larger). Second-stage pre-filter shall have a medium efficiency (i.e., effective for particles down to 5 µm). Pre-filters shall be installed either on or in the intake grid of the unit and held in place with special housing or clamps. All filters shall be disposed of in accordance with the more stringent of all applicable state, local and federal requirements.

E. Electrical Lockout

Provide an electrical (or mechanical) lockout to prevent HEPA filtration units from operating without a HEPA filter. Devices shall be equipped with automatic shutdown system to stop the ventilation fan in the event of a major rupture in the HEPA filter or blocked air discharge. Warning lights are required to indicate normal operation, too high a pressure drop across the filters (i.e., filter overloading), too low of a pressure drop (i.e., major filter overloading), and too low of a pressure drop (i.e., major rupture in HEPA filter or obstructed discharge).

F. Supplemental Make-Up Air Inlets

Provide (where required) for proper airflow through the workspace openings in the plastic sheeting to allow airflow from outside the building into the work area. Locate auxiliary make-up air inlets as far as possible from the ventilation unit (i.e., on an opposite wall), off the floor (preferably near the ceiling), and away from barriers that separate the work area from occupied clean areas. All supplemental make-up air inlets must be approved by LSKCK prior to installation. All supplemental inlets that "short-circuit" good containment area air flow and reduce the necessary air pressure shall be removed and the opening sealed.

1. Start exhaust units before beginning work; before any paint or any lead containing material or surface is disturbed; and before being in the closed containment for

any extended period of time to allow make-up air to be introduced. After hazard control, construction, or cleanup work has begun, run units continuously to maintain constant ventilation and air filtering until hazard control, construction, or cleanup work is complete.

2. Do not shut down filtration system during hazard control operations, construction, or cleanup procedures involving this Project.

3. Start hazard control work at a location farthest from the exhaust units and proceed toward ventilation units. If an electric power failure occurs, immediately stop all hazard control work and start engineering controls, work practice controls and other dust reduction activity, such as wet misting, and do not resume work until power is restored and all ventilation units are properly and fully operating again.

G. CLEANING

1. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of physical hazards, at all times during execution of all portions of the work.

2. The project site shall be kept free from all accumulations of all debris and all wastes that in any way results from any hazard control related and /or any construction-related activities.

3. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces of the all work areas and regulated areas.

   a. Remove all of the refuse to the appropriate disposal container.

   b. Upon completion of this portion of the work, thoroughly and properly decontaminate and clean all work surfaces.

END OF SECTION

SECTION 01555 - WORKER PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. The hazard control project shall be supervised by persons trained in accordance with OSHA 29 CFR 1926.62 and the EPA/KDHE approved Lead Abatement Supervisor training curriculum. Training shall include the requirements noted in this specification, as well as that required in OSHA 29 CFR 1926.62, Paragraph (L), "EMPLOYEE INFORMATION AND TRAINING" and other applicable sections of 29 CFR 1926.62, 29 CFR 1926.59, OSHA Hazard Communication Standard for the Construction Industry, EPA 40 CFR 745, “LEAD: REQUIREMENTS FOR LEAD-BASED PAINT ACTIVITIES IN TARGET HOUSING AND CHILD-OCCUPIED FACILITIES; FINAL RULE”, and the KDHE Certification requirements.

B. The hazard control project shall also be completed by abatement workers trained in accordance with OSHA 29 CFR 1926.62 and the EPA/KDHE approved Lead Abatement Worker training curriculum. Training shall include the requirements noted in this specification manual, 29 CFR 1926.59 OSHA Hazard Communication Standard for the Construction Industry, as well as that required in OSHA 29 CFR 1926.62, Paragraph (L) "EMPLOYEE INFORMATION AND TRAINING", and other applicable sections of 29 CFR 1926.62, EPA 40 CFR 745, “LEAD: REQUIREMENTS FOR LEAD-BASED PAINT ACTIVITIES IN TARGET HOUSING AND CHILD-OCCUPIED FACILITIES; FINAL RULE”, and the KDHE Certification requirements.

C. The Contractor shall at all times and in all ways know, understand and abide by the more stringent of all state, local and federal requirements, regulations, standards, ordinances, statutes, and laws.

D. Related Work

General provisions of the contract, including general and supplementary conditions, Attachment A and/or amendments as may be issued, Division 1, 2, 5, 6, and 9 of the specifications, and other sections of the specification as may be added, apply to the work of this section. The contract documents, these specifications and/or Attachment A show the work of the contract and related requirements and conditions impacting the project. Related requirements and conditions include, but are not limited to: applicable codes and regulations, notices and permits, restrictions on use of the site, requirements for partial LSKCK occupancy during work, coordination with other work, and phasing of work.

Whenever there is a conflict or overlap of any of the above references, the most stringent provisions shall always apply.

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

B. Product Data

1. Materials list of items proposed to be provided under this Section;

2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;

3. Manufacturer's recommended application or use procedures, which, when approved by LSKCK, will become the basis for accepting or rejecting actual application or use procedures used on the Work.

4. If requested, the Contractor shall prepare and submit to LSKCK a contingency plan to meet all OSHA requirements of 29 CFR 1926.62. The plan shall include among other things, an outline of how the various items will be addressed, in accordance with OSHA requirements and a contingency plan for emergencies including fire, accident, failure of power, failure of filtration ventilation system (if used), break in containment wall, contamination of clean or occupied areas, or any other event that may require modification of standard operating procedures during hazard control, or other construction activity involving lead containing materials.

5. If any air monitoring results show that any air concentrations meet or exceed the OSHA Permissible Exposure Limit (PEL = 50 $\mu g/m^3$), Contractor shall develop an OSHA compliant Compliance Plan. This Compliance Plan shall be readily available to all on-site personnel at all times. Contractor must ensure that all Contractor staff have been properly trained in the safe and proper use of the Contractor's OSHA Compliance Plan. A copy of this Plan shall be provided to LSKCK upon request.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills, crafts, and who are completely

familiar with the specified requirements and the methods needed for proper performance of the work of this specification.

B. Certifications and Licenses

Each person proposed to be used on the lead hazard control project must provide a KDHE certification proving that they are certified to conduct lead abatement work in the state of Kansas. The LSKCK must approve all worker and supervisor's certifications before they can come onto the project site. Each firm must also demonstrate to the satisfaction of LSKCK that they are licensed as a Lead Activity Firm in the state of Kansas.

C. Medical Examinations

The Contractor shall provide, when requested, proof of medical examinations for all workers, all supervisors, all other employees and sub-contracted personnel entering the work area per OSHA 29 CFR 1926.58 and 29 CFR 1926.62, whenever any one Contractor task has met or exceeded the OSHA Action Level (AL). In addition to the medical monitoring requirements under OSHA 20 CFR 1926.62, the Contractor's physician shall also perform an evaluation of each worker's ability to work in heat and cold stress environments, as well as their ability to use a respirator. Medical examinations must include the following as a minimum:

1. A detailed work and medical history that pays particular attention to past lead exposure and past gastrointestinal, hematological, renal, cardiovascular, reproductive, and neurological problems, as well as personal habits such as smoking and hygiene;

2. A thorough physical examination that pays particular attention to teeth, gums, and hematological, gastrointestinal, renal, cardiovascular, and neurological systems;

3. Evaluation of pulmonary status to determine whether the worker is capable of wearing a respirator;

4. A blood sample and analysis that determines blood lead levels, hemoglobin, hematocrit, red cell indices, peripheral smear morphology, blood urea nitrogen, serum creatinine, and zinc protoporphyrin;

5. A blood pressure check;

6. Pregnancy testing or laboratory evaluation of fertility, if requested by worker; and,

9. Any laboratory or other test, which is recommended by the examining physician.

The Contractor shall be responsible for compliance with all applicable OSHA regulations, including, but not limited to: OSHA 29 CFR 1926.62 for medical surveillance, record keeping, and access to medical records. All OSHA regulations will apply, including, but not limited to, those indicated in 29 CFR 1926.62 and its appendices, and 29 CFR 1910.20.

D. Emergency Plan and Precautions

1. Contractor shall prepare an Emergency Plan. The emergency plan shall establish emergency fire exits from the hazard control, construction, or cleanup activity area. All emergency exits shall be equipped with two (2) full sets of protected, non-contaminated, and clean protective clothing at all times. Emergency exits shall be clearly marked with masking tape arrows (or other appropriate means) showing the direction of exit. All exits shall have a utility knife attached by hanging from a string on the interior of the containment where seals or plastic must be cut or broken to exit.

2. The emergency plan shall provide that local medical emergency personnel, fire, police, and hospital emergency room staff be notified prior to commencement of hazard control, construction, or cleanup operations as to the possibility of having to handle lead-contaminated workmen, and shall be advised on safe lead decontamination. The telephone number for the closest emergency service agencies shall be posted in an area that is known and readily available to all persons on site (e.g., the clean room of the decontamination facility).

3. Before the Contractor starts actual control of the lead hazards and any activity that might disturb any known or LSKCK assumed lead containing material on projects anticipated to take longer than three (3) weeks, security and building cleanup and fire departments and other emergency personnel shall be notified as to the danger of entering the containment areas and they shall be invited to attend an informal training program to be conducted by the Contractor which provides information regarding hazard control activities, decontamination practices, etc. The Contractor shall make every effort to help these agencies form plans of action should their personnel need to enter the contaminated areas.

4. The emergency plan shall indicate how the Contractor is prepared to administer first aid to injured personnel during decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall stop all work and immediately implement all necessary lead dust reduction techniques (i.e., HEPA vacuuming and water misting) until the injured person has been removed from the containment area.

E. Personal Protective Equipment/Clothing

When required by regulatory authority, by an MSDS or when so requested by any Contractor staff, appropriate and proper Personal Protective Equipment/Clothing (PPE) shall be provided free of charge to all impacted Contractor staff, as well as to LSKCK staff. When so provided, PPE must be properly functional and used during set-up, during clean-up, during hazard control, during construction, whenever any Contractor staff or sub-contractors enter the regulated or containment area of a hazard control work area, and at all times prior to the area successfully passing clearance testing. Contractor's staff entering the hazard control work area or containment area shall not wear any of their own clothing into the hazard control areas unless the clothing remains in the hazard control area and is disposed of as lead-contaminated waste. When PPE is mandated or is being used for any reason, all persons entering the hazard control work area shall be supplied with a new disposable suit every time he/she re-enters the regulated/hazard control work area. The Contractor shall at all times provide all disposable protective clothing and all other necessary PPE (except respirators) to the LSKCK and other authorized visitors for use in the hazard control area.

The following listed items are not meant to be and should not be construed to be, a complete or exhaustive list. It is incumbent upon the Contractor to know, understand, abide by, and ensure compliance with all applicable OSHA regulations and all manufacturer's MSDS, so as to ensure the health and safety of all persons on-site.

When required and/or used for any reason, the following protective clothing items will be considered for use whenever entering regulated or hazard control work areas:

1. Coveralls

All Contractor's personnel, as well as all others entering the regulated/hazard control work area, shall wear disposable full-body coveralls with attached disposable foot covers and disposable head covers. When working with chemical strippers or when so required by MSDS, Contractor shall supply chemically

resistant disposable protective coveralls to all associated staff. A sufficient number of coveralls (for a minimum of two day period) shall be provided for all required changes for all personnel in the work area and others who might enter the containment area, at all times. Disposable coveralls shall be removed and discarded as contaminated waste upon leaving the containment area each time.

2. Foot Coverings

If the required disposable shoe covers are removed from the disposable coveralls, all hazard control personnel or other persons entering the containment area shall wear rubber or vinyl boots or 18 inch tall disposable foot covers. All non-rubber or non-vinyl boots shall remain in the dirty area and shall be disposed of as contaminated waste at the end of the project. Rubber boots, vinyl boots or boots made of any other impervious material that allows for complete and thorough decontamination by cleaning with an appropriate detergent in the shower may be reused. Use tape to secure disposable foot coverings at the ankles or legs to the disposable coveralls.

3. Head Protection

All hazard control personnel and others entering the containment area, when required by OSHA or Contractor policy, shall wear hard hats. Hard hats shall be worn at all times that work is in progress, which may cause head injury as required by OSHA. Hard hats shall remain in the work area throughout the work. At the end of a project, thoroughly clean and decontaminate hats before removing them from the containment area.

4. Eye Protection

Appropriate eye protection shall be worn for all work tasks as required by OSHA, (unless a full-face respirator is in use), for all personnel involved in scraping, spraying, when recommended by equipment/material/product manufacturer, where required by Material Safety Data Sheets (MSDS), or any other activity which might cause an eye injury due to splash or fragmentation. Thoroughly clean and decontaminate all eye protection devices before removing them from the containment area.

5. Gloves

All hazard control personnel or others shall wear appropriate gloves in the

regulated, hazard control and/or containment areas. Gloves shall be in full compliance with OSHA requirements, including those gloves indicated in a manufacturer's MSDS. Examples of gloves includes, but are not limited to; leather, cotton, jersey, disposable plastic, vinyl, nitrile, or rubber, as required to protect the hands from all contamination and all work activities. Use tape to secure gloves at the wrists to the disposable coveralls.

6. Respirators

Respirators shall be provided, properly functional and used in accordance with the most stringent of all applicable OSHA regulations or Section 01556 – "Respiratory Protection", of this specification.

F. Site Safety

1. The Contractor is responsible for all health and safety at the work site. This includes, but is not limited to electrical safety, chemical safety, physical safety, biological safety, environmental safety, mechanical (tool) safety, fire safety, and personal protection safety. Contractor shall meet the most stringent of all federal, state, and local regulations that are applicable. Where any regulatory agency or regulation contradicts another regulatory agency or regulation, Contractor is responsible for adhering to the most stringent requirements that are in effect.

2. A principal concern at the hazard control project site is to ensure that adequate exits exist in the event of an emergency and conversely, that adequate entrances exist for emergency personnel. The work requires sealing entrances and the extensive use of 6-mil polyethylene sheeting; however, the Contractor should never permanently seal (e.g. nail, lock, bolt, hard cover) any potential escape exits and must identify and inform all personnel on-site and all site visitors of the location of all required exits.

1.4 PROJECT/SITE CONDITIONS

A. LSKCK and/or the Owner will provide access as required during the project to the Contractor, personnel assigned to the project, LSKCK, and other authorized persons. The Contractor shall be responsible for the security of each building or portion thereof involved in the hazard control project, until the Contractor has successfully achieved final dust lead clearance. It will also be the Contractor's responsibility to allow only authorized personnel into the work area, and to secure all dwelling unit entrances and exits at all times, but particularly at the end of the work day, so as to prevent any

unauthorized entry.

B. Security measures shall be taken to prevent entrance into a containment area during non-work hours by all appropriate means, which can include plywood and 2" x 4" s at 16" o.c. stud partitions covered with at least 1/2" CDX plywood forming a wall and locked doorway(s).

C. The Contractor should maintain a bound log book with pre-numbered pages in which any and all persons entering or leaving any of the lead hazard control work areas must sign and enter the dates and times of entry and departure. A notarized copy of the log book indicating its authenticity as representing the actual job-site logbook shall be given to the LSKCK within 7 days after the project has ended and before final payment can be approved.

D. A representative of the Contractor (e. g., “outside man”, etc.) shall be stationed within close proximity to the unlocked containment entrance to prevent unauthorized visitors entrance to the hazard control work area during Contractor work hours.

PART 2 - PRODUCTS

2.1 PERSONAL PROTECTIVE EQUIPMENT

A. Contractor must ensure that all personal protective equipment (PPE) shall at least meet the more stringent of all OSHA, MSHA, NIOSH, KDHE, UL, NIST, ASTM, ACGIH, AIHA, ANSI, and all other federal, state, and local regulatory requirements before it is brought onto the site. The standards indicated shall be considered minimum acceptable.

B. When so requested, Contractor shall supply a list of all personal protective equipment (PPE) used. All PPE shall meet all of the standards indicated and noted elsewhere in this specification manual.

C. Work clothes

Coveralls shall be disposable with attached hood and booties. Coverall shall be sized to properly fit worker without unnecessary hanging or "bagging" portions. Nor shall coveralls be too tight or small where they don't cover the person entirely or the seams are subject to unnecessary stress because the coveralls are too small. Coveralls shall be constructed of a material which is impervious to air and water, and shall also be impervious to all other materials as indicated by a product manufacturer or MSDS.

E. Latex, Vinyl, Nitrile gloves/other approved gloves

All protective gloves shall effectively protect the worker from health and safety hazards, shall fit the worker's hand properly and be made of a material that is impervious to air and water, and shall also be impervious to all other materials as indicated by a product manufacturer or MSDS.

F. Boot and Boot Covers

Boots or Boot covers shall be of proper size to fit the person's foot and shall be constructed of a material which is impervious to air and water, and shall also be impervious to all other materials as indicated by a product manufacturer or MSDS.

G. Other Protective Equipment

Other personal protective equipment (PPE) such as, but not limited to, hard hats, steel-toed footwear, steel shank footwear, fall arrest systems, safety glasses/goggles, etc. shall be required for all types of work in order to completely protect all persons on site from all heath and safety hazards, as required by OSHA. All PPE shall be provided free of charge to all personnel and shall be properly used in accordance with all applicable OSHA regulations.

PART 3 - EXECUTION

3.1 PROCEDURES FOR USING WORKER PROTECTION

A. Entering the Work Area

Each time a supervisor, worker, or other Contractor staff enters the hazard control work area, when the PEL is known or assumed (by LSKCK) to be met or exceeded, they shall utilize the following procedures:

1. Remove completely all street clothing, underclothing and/or underwear, change into work clothing, head covers, gloves, and shoe covers in the clean section of the designated changing areas (change [clean] room of the decon) and enter the work area through airlocks, shower, airlock, and equipment (dirty) room of the decontamination unit. Store all street clothing in the provided locker in the clean/change room. If a member of the opposite sex is required to enter or exit the work area, make all necessary provisions to ensure their privacy throughout the decontamination process by posting guards at both entry points of the decontamination facility so that no member of the opposite sex will enter or exit

during their stay, or as alternatives, either provide separate decontamination facilities for both male and female workers, or allow male and female workers to work in 30 minute staggered shifts so they are not using the decontamination facilities at the same time;

2. Use work garments of appropriate size, and use duct tape or similar product to reinforce all seams that might be subject to stress (e.g., underarm, crotch, and back). Use duct tape or similar product to attach and seal gloves and boot covers to the disposable suit;

3. Select, donn and wear all appropriate and properly functioning personal protective equipment (PPE), including, but not limited to; respirators, toe guards, face shields, hard hats, etc., before entering work area;

4. Store all additional non-contaminated hazard control work clothing and PPE in the designated changing area (clean room); and,

5. Wear completely dedicated clothing that is appropriate for existing weather and temperature conditions under the protective clothing. This clothing shall remain in the contaminated area of the work area containment and shall be disposed of as contaminated.

B. Exiting the Work Area

Each time a supervisor, worker, or Contractor staff person exits the hazard control work area, they shall follow the procedures listed in Section 01715 - Project Decontamination. All personnel must leave the hazard control area to eat, smoke, dip/chew tobacco, drink, apply cosmetics, use toilet facilities, chew gum, or any other activity which may contaminate oneself with lead dust or debris.

C. Other Protective Equipment

1. Goggles (or other appropriate eye protection) with side shields shall be worn when working with a caustic material (or any other material) that may splash or a material that may break, fragment or splinter. Eyewear must also be worn if specified on the Material Safety Data Sheet (MSDS) for working with the materials, or as required by any and all other applicable regulations.

2. Additional respiratory protection, such as organic vapor cartridges may be necessary when handling some materials or products. Consult the manufacturer

and/or the appropriate MSDS and obtain and use the proper respiratory filter cartridges.

END OF SECTION

SECTION 01556 - RESPIRATORY PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. When required by state, local and/or federal law, regulation, statute and/or ordinance, or when necessary to protect the health and safety of any Contractor staff person, respiratory protection shall be used by all Contractor personnel during set-up, tear down, clean-up, demolition, mobilization, demobilization, when conducting any hazard control activity, or when working with any surface, material or item of any known or unknown lead content, until all properly conducted air sampling for each and every separate job site task indicates that airborne lead levels fall below the requirement to use respiratory protection (50 $\mu g/m^3$ of air over an 8 hour Time Weighted Average). Respirators with appropriate filter cartridges shall be used whenever regulated areas, work area or hazard control/hazard control area contaminant containment controls are utilized.

B. Without respect to this specification section, the Contractor shall ensure that all respiratory protection, all respirator selection, all respirator use, all respirator maintenance and care, all respirator user seal checking, and all respirator fit testing be performed in strict accordance with all sections and parts of all applicable OSHA regulations, including, but in no way limited to: 29 CFR 1926.62, 29 CFR 1910.134, etc. NIOSH Decision Logic (Publication # 87-108) may be used as a guide for assistance in respirator selection.

C. Related Work

General provisions of the contract, including general and supplementary conditions, addenda, Divisions 1, 2, 5, 6, and 9 of the specifications, Attachment A, and other Divisions of the specification as may be added, apply to the work of this section. The contract documents show the work of the contract and related requirements and conditions impacting the project. Related requirements and conditions include, but are not limited to: applicable codes and regulations, notices and permits, existing site conditions and restrictions on use of the site, requirements for partial LSKCK occupancy during work, coordination with other work and phasing of work. Whenever there is a conflict or overlap of the above requirements, the most stringent provisions shall apply.

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

B. Product Data

1. Materials list of items proposed to be provided under this Section;

2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;

4. Manufacturer's recommended application or use procedures, which, when approved by LSKCK, will become the basis for accepting or rejecting actual application or use procedures used on the Work.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills, crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this specification.

B. Written Respiratory Protection Program

The Contractor shall develop, implement, and maintain a written respiratory protection program that complies with all OSHA requirements. The Program shall at least consist of the following elements:

1. Written statement of company policy, including assignment of individual responsibility, accountability, and authority for required activities of the respiratory protection program.

2. Written standard operating procedure governing the selection, use and maintenance of respirators.

3. Respirator selection (from NIOSH approved and certified models) on the basis of hazards and exposure levels to which any worker is exposed.

4. Medical examination of workers to determine whether or not they may be assigned an activity where respiratory protection is required.

5. User training in the proper use, maintenance and limitations of respirators (as well as ways to evaluate the skill and knowledge obtained by individuals through

training).

6. At least annual respirator fit testing

7. User seal checks every time that the respirator is donned (put on) by any person.

7. Cleaning, disinfecting, drying and storage of respirators, including the frequency.

8. Routine and regular inspection of respirators during cleaning and before donning, as well as at least once a month and after each use for those respirators designated for emergency use.

9. Storage of respirators in a non-contaminated, dry, clean, and sanitary location, in crushproof containers.

10. Surveillance of work area conditions and degree of employee exposure (e.g., through frequent exposure assessments and exposure monitoring).

11. Regular inspection and evaluation of the continued effectiveness of the program.

12. Recognition and resolution of special problems as they affect respirator use (e.g., facial hair, eyeglasses, scars, dentures, localized swelling, weight loss/gain, etc.).

13. Proper respirator use and user seal checks, as well as procedures for donning and doffing respirators when entering and exiting the hazard control work area or regulated area.

C. Respiratory Protection Program Evaluation

The Contractor shall routinely and periodically assess the effectiveness of the respiratory protection program during all phases of all hazard control operations. Frequent walk-through inspections during any and all hazard control activities shall be conducted to monitor and document supervisor and worker compliance with the requirements of the program. In addition to the general assessment of the overall respiratory protection program, specific evaluations of respirator cleaning, inspection, maintenance, repair, storage, and use procedures shall be frequently conducted and documented to ensure that the desired results of these operations are consistently achieved. All issues and problems, including the following special problems, shall be addressed and resolved, if encountered during program evaluation:

1. Facial hair, including beards, mustaches, sideburns or more than one days' beard

growth shall not be allowed if a person is using a tight fitting respirator facepiece and if facial hair in any way prohibits or in any way diminishes a proper seal between the respirator and the person's face.

2. Eye glasses shall not be used with full-face respirators. Special corrective lenses are available from all manufacturers and shall be permanently mounted by an individual designated by the manufacturer as qualified to install accessory items. Eyeglasses and goggles may interfere with half-face and/or full-face respirators. In this case, a full facepiece with special corrective lenses as installed by the manufacturer shall be provided.

3. Facial deformities that prevent tight seal include, but are not limited to; scars, deep skin creases, localized swelling, prominent cheekbones, severe acne, lack of teeth, use of dentures, etc.

4. Communications while wearing a respirator with a facepiece can break the seal of the facepiece. When communication is necessary within the work area, it shall be done with the help of special communicating equipment obtained from the respirator manufacturer, or with the use of specifically indicated hand signals that are known and immediately recognized by all personnel.

PART 2 - PRODUCTS

A. Respirator Selection

1. The Contractor shall provide, at a minimum: half-mask air purifying respirators equipped with HEPA cartridges for airborne lead dust levels that are known or assumed to not be between 50 $\mu g/m^3$ and 499 $\mu g/m^3$ (10 times the PEL); Full-face powered air purifying respirators (PAPR) with HEPA cartridges for airborne lead dust levels from 500 $\mu g/m^3$ to not in excess of 2,500 $\mu g/m^3$; and pressure demand, full-face supplied air respirators when airborne lead dust concentrations are expected to exceed 2,500 $\mu g/m^3$. Respirators and HEPA (or Organic Vapor) cartridges shall be NIOSH approved. In lieu of respirators noted, the Contractor may provide as a minimum, if approved by LSKCK, respirators as specified in 29 CFR 1926.62 "Lead Exposure in Construction", Table 1.

2. Respirators shall be paid for, provided free of charge and individually assigned to all Contractor personnel; workers, supervisors, etc. for their own and exclusive use.

PART 3 - EXECUTION

A. Respirator Use

Unused filter cartridges shall be stored in an area where they will not be subject to any dust, excessive humidity, excessive heat, or contamination. New cartridges shall be installed whenever the worker notices a difficulty in breathing, when odors are evident while wearing a respirator or when the cartridges become wet during showering. The Contractor shall maintain an adequate supply of both HEPA and organic vapor cartridges, appropriate for each type of respirator used and each type of hazard control being completed, which allow for all persons to change cartridges as often as may become necessary. The cartridges shall be properly disposed of in accordance with the more stringent of local, state, federal requirements, or the requirements of the ultimate Treatment, Storage and Disposal (TSD) facility. Respirators shall be used, but not limited to, the following situations, in accordance with all applicable regulations:

1. During work area or containment area preparation (set-up);

2. During any hazard control, abatement or interim control strategy implementation, including, but not limited to; manual demolition of a structure or building component, application of Enclosure materials, working with any known/assumed/potential lead-containing material, manual scraping, manual sanding, use of heat guns, use of chemicals, use of power tool cleaning with or without dust collection systems, etc.;

3. When installing barriers, sawing, hammering, drilling, or doing similar work that could disturb known/assumed/potential lead-containing materials through shock or vibration;

4. In hazard control, regulated or containment areas from the time set-up or hazard control of known/assumed/potential lead-containing items begins until clearance-sampling results are acceptable;

5. In "Load Out" areas and while loading bags or drums from the area and loading them onto the disposal truck, and at the disposal site during unloading; and,

6. At all other times as required by federal, state, and local regulations.

B. Respirator Fit Check/User Seal Check
All personnel shall perform a positive/negative pressure user seal checks each time the

respirator is put on, as the respirator design allows, as suggested or mandated by respirator manufacturer, and as the Contractor's respiratory protection program requires. All user seal checks and all fit testing shall be conducted in strict accordance with all applicable OSHA regulations.

1. Positive Pressure User Seal Check

Positive pressure user seal check is conducted by closing the exhalation valve with the hand and exhaling gently for at least 10 seconds. A slightly positive pressure shall be built up inside the face piece without any outward leakage of air from the face piece.

2. Negative Pressure User Seal Check

Negative pressure user seal check shall require the respirator wearer to cover the filter air-intake areas with the palm of the hand and breathe in gently, holding breath for 10 seconds. A proper fit is indicated if the face piece collapses slightly without inward leakage of air into the face piece around the face seal.

C. Respirator Cleaning

As part of the OSHA required respiratory protection program, all respirators shall be cleaned after each use by the wearer or the respiratory protection program administrator (or his/her designee) at the end of each shift. Collect and store all respirator equipment in the change room of the decontamination facility for additional inspection and cleaning daily. Every individual person's respirator shall bear individual identification and shall always be assigned to the same person. Perform continuous inspection of respirators to identify any and all malfunctions. Inspections shall be performed in accordance with OSHA, manufacturer's instructions, as well as the Contractor’s written respiratory protection program. Repair of respirators and replacement of parts shall be done by an individual with special training. Replacement parts for the respirators shall be from the same manufacturer of the respirator only. Substitution of parts from a different brand or type of respirator, or unauthorized modification of a respirator will render the respirator to be considered non-approved and it shall be immediately removed from the project site and destroyed. Store respirators in a clean, dry, and sanitary location to ensure proper function when used. Protect against dust, chemicals, sunlight, excessive heat, excessive humidity, excessive cold, and any/all types of mechanical damage. Store thoroughly dried respirators in sealed and clean and contaminant free environment, in a crush proof container.

END OF SECTION

SECTION 01715 - DECONTAMINATION

PART 1 - GENERAL

1.1 SUMMARY

Decontamination involves decontaminating all work areas, all equipment, all tools, all materials, all regulated areas, all items, all containerized lead contaminated waste, all non-lead contaminated wastes, all other items that are removed from the containment area, as well as all personnel exiting from within the project work area or regulated area. Decontamination involves implementing proper and appropriate procedures for decontamination of all personnel, all tools, all areas of decontamination and containment areas itself, as well as all other items on a daily and intermittent daily basis.

A. Decontamination involves the decontamination of at least the following four (4) primary areas:

1. Decontamination of all areas of the decontamination facility (i.e., change [clean] room, showers, and equipment [dirty] room), and the load out area (if separate).

2. Decontamination of all personnel leaving the work, containment or regulated area.

3. Decontamination of all equipment, supplies, tools, materials, bagged or containerized waste, and other items leaving the work, containment or regulated area.

4. Decontamination of all areas of the containment/work/regulated area to prepare it for clearance sampling.

B. Provide decontamination where and to the extent shown on the drawings (if provided), as specified herein, as required by other sections of this specification, as needed for personnel health and safety, and as needed for a complete, safe, and proper hazard control work process and project work area.

C. Related Work

1. Documents affecting the work of this section include, but are not necessarily limited to General Conditions, Supplementary Conditions, Attachment A, Sections in all Divisions of this specification and as shown on the drawings (if provided).

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - Submittals.

B. Product Data

1. All materials list of all items proposed to be provided under this Section;

2. All Manufacturer's specifications and all other data needed to prove compliance with the specified requirements;

3. Shop drawings in sufficient detail to show all fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades;

4. All Manufacturer's recommended installation, removal, application or use procedures, which, when approved by LSKCK, will become the basis for accepting or rejecting actual installation, application, or use procedures used on the Work.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills, crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. All materials shall be delivered to the project site in their original cartons or packing. All Materials shall be stored in a safe, secured, climate controlled, and dry area. Heat shall be provided for all materials affected by cold weather and temperature reduction appliances shall be used for all materials affected by hot weather.

PART 2 - PRODUCTS

2.1 Materials

A. The following non-inclusive list of materials will be considered for decontamination use on lead-based paint hazard control projects:

1. Waste disposal bags - 6-mil thick polyethylene bags labeled with or without minimum

two-inch high letters stating "Caution; Lead Containing Materials".

2. Disposal drums - Non-porous, sealable/lockable drums for disposal of items that could tear bags.

3. Disposal Container - Roll-off dumpsters that are lined with a minimum of two layers of 6-mil polyethylene sheeting. Dumpsters shall have a solid and lockable top.

4. Signs and labels - Illuminated notification signs, visible from all angles of approach to the dwelling units, which include the phrase "Caution Lead Hazard, Keep Out, No Smoking or Eating", in bold lettering at least two inches high. Also provide signage that complies with applicable KDHE and OSHA regulations and reads "Warning - Lead Work Area - Poison - No Smoking or Eating." Signage shall comply with all applicable KDHE and OSHA regulations. Construction area caution and warning signs, web fencing and/or barrier tape indicating "Authorized Personnel Only" without reference to lead-based paint are also required to restrict access to authorized personnel only.

5. Duct tape, adhesive, and fasteners for polyethylene, plywood, disposal bags, and drums.

6. Filters - HEPA filters, organic vapor filters, respirator cartridges/filters, pre-filters for HEPA ventilation units and HEPA vacuums, and water filtration.

7. Towels - Disposable towels for drying after personal decontamination.

8. Soap - Adequate supplies of appropriate detergents for showering and personal decontamination shall be available at all times during the project.

9. Wet wash solution (lead removal agent) - Solution containing a 5 percent solution of TSP or a non-TSP lead sequestering and removal detergent (i.e., LEDIZOLV or equivalent), mixed according to manufacturer's recommendations.

10. Surface sealing materials - Materials such as wax, polyurethane, varnish, paint, or other sealant material as approved by LSKCK and used in accordance with manufacturer's recommendations.

2.2 Equipment

A. The following non-inclusive list of equipment will be considered for decontamination use on lead-based paint hazard control projects:

1. Carts - Constructed of opaque materials with a secure fitting lid used for transporting filled

disposal bags from work area, regulated area, and/or Load Out to temporary disposal storage facilities.

2. Cleanup equipment - The Contractor shall provide an adequate number of mops, rags, shovels, buckets, scrapers, brushes, spray washers, etc. in sufficient quantities to effect the proper and complete clean up of all lead-based paint debris, dust, and water as removal and cleaning proceeds. At least one properly functional wet/dry HEPA-filtered vacuum cleaner shall be on-site. Vacuums not HEPA-filtered and brooms are not permitted on-site.

3. Electrical power - Ground wire equipped extension cords without splices. A sufficient number of GFCI units to protect all electrical equipment inside the hazard control area.

4. HEPA vacuum(s) - The Contractor shall provide HEPA vacuums for personal decontamination, clean up and for hazard control project site clean up before, during and after hazard control.

5. Water sprayer - A water sprayer/mister to wet all dust and/or debris that is generated by the hazard control or associated work.

6. Ladders and scaffolding - A sufficient number of OSHA approved and properly used and maintained ladders, scaffolds, platforms, and walkways for use during preparation, hazard control, inspections, and cleanup shall be provided by the Contractor.

7. Lighting - The Contractor shall supply a sufficient number of portable lighting units to provide adequate illumination (in compliance with all OSHA requirements) at all locations within the work areas.

8. Shower facilities - Showers providing a continuous supply of hot (105 °F) and cold water, adjustable by the user, whenever hazard control personnel or visitors are in gross removal areas requiring shower decontamination facilities. Clean personnel exiting the shower shall not pass contaminated surfaces before entering the Clean Room. The shower shall be supplied with soap and shampoo, and a shower basin with a drain or grate to elevate the person's feet above pooled water. All water shall be appropriately collected, contained, filtered, and stored in appropriate containers.

9. Other hazard control equipment - All other tools, equipment, materials, supplies, and accessories as may be necessary to complete the requirements of the project, as specified in these documents, and as required by local, state, and federal requirements and/or guidelines, in a safe, professional, workmanlike and efficient manner, in accordance with all applicable standard industry practices.

PART 3 - EXECUTION

3.1 DECONTAMINATION PROCEDURES

Decontamination procedures shall at least consist of the following:

A. Decontamination Facility and Load Out Area

All parts of the decontamination facility and the entire load out area (if separate) shall be decontaminated daily or at the end of each work shift.

1. Decontamination of the decontamination facility shall at least consist of:

a. Changing filters in the shower drainage filter system daily. All filters shall be considered contaminated with lead and disposed of accordingly and appropriately.

b. Washing down all surfaces of the shower rooms after each shift and clean debris from the shower pan. Wash shower room with approved lead removal agent at least once a day. Properly dispose of all waste and residue as lead contaminated materials. The "air lock" on either side of the shower room shall also be washed down with approved lead cleaning agent at the same time as the shower room.

c. HEPA vacuum and damp wipe clean, with an approved lead sequestering and removal detergent, all surfaces of the equipment room after each shift change. Provide an additional floor layer of 6-mil clear polyethylene sheeting per shift change and remove the contaminated layer after each shift.

2. Decontamination in the Load Out shall at least consist of the following:

a. HEPA vacuuming and wet wash down all surfaces of the load out and the load out "air lock" to the outside at the end of each load out procedure where waste, equipment, etc, is loaded out and at the end of each day or work shift. All visible debris, particles, dust, and residue shall be removed from all surfaces so area is visibly and completely decontaminated.

B. Personnel Decontamination

Hazard control personnel leaving the containment work area shall be decontaminated in at least the following manner. Each time a supervisor, worker, or other Contractor represented person exits the hazard control work area, regulated area and/or containment area, they shall at least

follow the following listed procedures. All personnel must leave the hazard control area when going to eat, smoke, dip/chew tobacco, drink, use toilet facilities, chew gum, apply make-up, or any other activity which may in any way contaminate oneself with lead dust or debris.

1. HEPA vacuum all protective work clothing while it is still being worn in the equipment room, taking care to remove any and all visible contamination or debris;

2. Remove protective clothing and all other PPE in the equipment (dirty) area of the designated changing area, **except respirator**. Remove hood and then protective coveralls by carefully rolling down the garment, turning inside out to reduce exposure to dust, then remove gloves. If latex, vinyl, nitrile or other protective material gloves (inner gloves) are worn under leather, rubber or other outer gloves, those types of gloves are the last item to be removed, after respirator removal;

3. Still wearing inner gloves and respirators, and completely naked proceed thru the "air lock" to the showers. Showering is mandatory when meeting or exceeding the OSHA PEL, otherwise at least face and hand washing facilities must always be on-site, functional and readily available at all times to all persons on site. Care must be taken to follow reasonable procedures in removing the respirator to avoid lead dust while showering. The following procedure is recommended as a minimum:

    a. Thoroughly wet the body including hair and face. If using a Powered Air-Purifying Respirator (PAPR) hold blower unit above head to keep canisters and battery dry.

    b. With respirators still in place thoroughly wash body, hair, respirator face piece, and all parts of the respirator (except the blower unit and battery pack on a PAPR). Pay particular attention to clean the seal between the face and respirator and under the straps. The exposed outsides of the respirator cartridges shall be wet misted and wiped, but must be protected from being overly wetted by placing duct tape or palms of hand over the air inlets, unless cartridges are to be disposed of after each and every use;

    c. Take a deep breath, hold it and or exhale slowly, completely wet hair, face, and respirator. While still holding or exhaling slowly, remove respirator and hold it away from face before starting to breathe.

    d. Carefully wash face piece of respirator inside and out. If using PAPR: shut down in the following sequence, fit cap inlets to filter cartridges, then turn off blower unit (this sequence will help keep debris which has collected on the inlet side of filter from dislodging and contaminating the outside of the unit). Thoroughly damp wash blower unit and hoses and carefully wash battery pack with wet rag. Be

extremely cautious of getting water in the battery pack as this may short out and destroy battery, and may cause injury. Dispose of wet filters as lead contaminated material.

4. After respirator has been removed, finish showering completely with soap and water; rinse thoroughly and then rinse shower room walls and floor prior to exiting. Vinyl, latex, nitrile or other protective “inner” glove is to be removed at this point.

5. Proceed from shower through "airlock" and into changing room and change into street clothes or into new disposable work clothing if planning to return to the work area.

6. Respirators shall be cleaned at a minimum, at the end of each work day or as is otherwise required by the respiratory protection program, respirator cartridges must be removed, and respirators cleaned in a disinfectant solution, clean water rinsed and air dried. Clean respirators should be stored in non-contaminated dust free environment and crush proof containers when not in use. The Contractor or his/her designee shall inspect all respirators daily for broken, missing, or damaged parts (see Section 01556 - Respiratory Protection).

7. Any person transferring bags of removed waste material and other items out of the work area, regulated area and/or loading area shall also dispose of their protective clothing and respirator cartridges in accordance with the more stringent of all applicable requirements. Any and all “street” clothing worn underneath disposable coveralls shall either be properly and completely decontaminated and laundered at the Contractor's expense or disposed of as lead contaminated. All personnel shall keep a set of spare “street” clothing in the clean room to wear if necessary.

C. Decontamination for Equipment, Tools, Bagged or Containerized Waste

These items and any other items leaving the containment area shall be thoroughly HEPA vacuumed and wiped with a lead sequestering detergent, so that all visible debris, particles, dust, and residue is removed and the items are completely decontaminated and clean.

D. Decontamination of the containment work area shall be at least in accordance with Section 01421 - "Project Clearance" and the following:

1. After LSKCK has passed the work area for completeness of hazard control (regardless of whether the hazard control is interim controls, physical removal, chemical removal, encapsulation, enclosure, for exterior soil or dust or for any other type of hazard control or hazard control), the Contractor shall thoroughly and properly clean the entire hazard control/work/containment/regulated area to remove **all** debris, waste, particulates, dust, and residue.

2. After **all** visible debris, waste, particulates, dust, and residue has been removed from the plastic floor covering, the wall, floor, and other plastic coverings, (except plastic on doors, windows, vents and all other penetrations through any wall, ceiling or floor [e. g., critical barriers]), shall be removed and properly disposed of. The plastic covering shall carefully be lightly misted, folded and rolled inward to contain any and all contaminants. After the plastic is removed, except plastic on doors, windows, vents and all other penetrations through any wall, ceiling or floor (e. g., critical barriers), all surfaces of the hazard control work area shall be thoroughly and properly decontamination cleaned. Until successfully achieving final wipe clearance samples, as outlined in Section 01421, "Project Clearance", the decontamination facility shall stay intact and be used by all Contractor personnel leaving and entering the work area. All critical barriers over windows, doors, vents, and all other penetrations shall also remain in place until successfully achieving proper final clearance. Until successfully achieving final clearance, all Contractor personnel entering the work area shall continue to wear and properly use respirators, protective clothing and all other necessary personal protective equipment (PPE).

    a. Cleaning shall be by HEPA vacuuming first, then wet washing with a lead removing agent (a test area shall be used to determine if the agent will damage any finishes), clean water rinsing, and finishing with HEPA vacuuming again. The hazard control area shall visually appear completely clean. If the area does not appear clean, in the opinion of the LSKCK representative, then the HEPA vacuuming, wet washing with lead removing agent, clean water rinsing, and HEPA vacuuming sequence shall be repeated until it does appear clean, in the opinion of the LSKCK representative.

3. After completeness of cleaning is approved by LSKCK, the floor shall be sealed in accordance with the manufacturer's recommendations for the materials used (e. g., concrete floors - use an appropriate best quality concrete sealer, wood floors - use a best quality polyurethane sealer, tile/sheet vinyl floors - use a heavy duty, best quality wax, etc.). Components that have been removed and replaced in accordance with Section 02065 (Removal of Lead-Based Painted Substrates) of these specifications, as well as all newly installed components, shall be sealed/painted in accordance with Attachment A and Section 09952 (Painting) of these specifications.

    a. After the hazard control area coating and sealing materials have dried (a minimum of 24 hours) then floor surfaces shall be cleaned again by:

        i. HEPA vacuum all floor or horizontal surfaces, then wet wipe with a lead removal agent, clean water rinsing, and HEPA vacuum again.
        ii. After the areas have been sealed and the horizontal and floor surfaces have been cleaned again, then clearance dust wipe sampling will be conducted in

accordance with section 01421 - Project Clearance.

END OF SECTION

SECTION 02065 - REMOVAL OF LEAD CONTAINING MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

A. Hazard control Procedure

Hazard control procedures address both specific substrate components and the generalities of substrate/component removal. All removed lead containing materials and the resulting debris require wrapping, bagging or some other type of proper containerization. The generalities of removal are described below. All resulting containers of removed materials and/or debris shall be carefully handled to reduce the potential of ripping, bursting, or otherwise diminishing the integrity of the container.

1. The Contractor must ensure that all substrates, all debris and all lead-contaminated materials are not burned or disturbed, so as to ensure that they do not result in lead exposure to workers, residents, children, the environment, general public, or observers.

2. Care must be taken to prevent any damage to any adjacent component or surface areas during the removal of materials or items, whether those items are replaced or not. The Contractor shall run a utility knife or other suitable tool around the edge (score) of the applicable substrate and any adjacent substrate to cut any bonding between the components and substrates and thereby reducing the potential for damage when an item is removed.

3. If substrates/components/materials to be removed contain gross areas of loose or peeling paint, these areas shall be wet scraped or HEPA vacuumed prior to removal. The paint chips shall be contained either in the HEPA vacuum or in a separate 6-mil polyethylene bag. Temporary Encapsulants for this purpose are acceptable.

4. Substrates/components/materials that are removed for replacement shall be wrapped or bagged with 2 layers of 6-mil polyethylene and stored for disposal. All disposals shall be in accordance with the most stringent of all applicable local, state and/or Federal regulations.

B. All work area containment shall be constructed and provided in accordance with Section 01506 "WORK AREA CONTAINMENT" and other sections as applicable.

C. All worker protection shall be provided in accordance with 29 CFR 1926.62, all other applicable OSHA requirements and with Section 01555 "WORKER PROTECTION" and other applicable sections of this specification.

D. Other related work:

1. Documents affecting work of the Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Attachment A, all Sections in Division 1 of the Specification, Section 02067, "Disposal of Waste Materials," and Section 09952, "Painting," of this Specification and as shown on the drawings (if provided).

1.2 SUBMITTALS

A. Comply with all pertinent provisions of Section 01302.

B. Product data:

1. Materials list of items proposed to be provided under this Section;
2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
3. Manufacturer's recommended installation, application or use procedures (as pertinent) which, when approved by LSKCK, will become the basis for accepting or rejecting actual installation, application or use procedures used on the work.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen, who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills and crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section, as well as all other sections, all regulatory requirements and all standard industry practices.

1.4 DELIVERY, STORAGE AND HANDLING

A. All materials shall be delivered to the project site in their original cartons or packing. All materials shall be stored in a safe, secured, temperature controlled, dry area. Heat shall be provided for all materials/items affected by cold weather and temperature reduction shall be provided for all materials/items affected by heat.

1.5 LEAD-BASED PAINT SUBSTRATES/COMPONENTS

All substrates/components to be removed shall be removed in a manner that prevents damage to any and all adjacent surfaces and minimizes dust releases, in a professional and workmanlike manner. All work shall be completed using best available technology, standard industry practices and state of the art technology and techniques.

1.6 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.7 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 APPROVED MATERIALS

A. As a minimum, the following non-inclusive list of materials, as well as others, will be considered for use on LBP substrate removal projects:

1. Polyethylene sheeting - 6-mil thick for covering non-removable items, floors, walls, ceilings, for construction barriers and wrapping objects too large to place into waste disposal bags. Opaque polyethylene shall be used for barriers on public side of enclosures. Nylon, polyester, or fiberglass reinforced polyethylene sheeting shall be used where additional strength is required. Fire retardant polyethylene shall be used where the potential for fire exists.

2. Disposal containers - Non-porous, sealable drums for disposal of items that could tear bags.

2.2 EQUIPMENT

A. As a minimum, the following non-inclusive list of equipment, as well as others, shall be considered for use on LBP substrate/component removal projects:

1. Carts - Constructed of opaque materials with a secure fitting lid used for transporting filled disposal bags from Load Out to temporary disposal storage facilities.

2. Cleanup equipment - The Contractor shall provide an adequate number of mops, rags, plastic scoops, shovels, buckets, scrapers, brushes, spray washers, etc. to clean up lead-based paint debris, dust, and water as removal and cleaning proceeds. At least one wet/dry HEPA-filtered vacuum cleaner shall be supplied. Vacuums not HEPA-filtered and brooms are not permitted on-site.

3. Electrical power - Ground wire equipped extension cords without splices. A sufficient number of GFCIs to protect all electrical equipment inside the Removal Area.

4. HEPA vacuum(s) - The Contractor shall provide HEPA vacuums for personal decontamination, clean-up, and for hazard control project site clean-up during and after hazard control.

5. Water sprayer - A water sprayer/mister (e.g. plant mist bottle, hand pump garden type, etc.) to wet all surfaces, as well as all dust and/or al debris that is generated by the hazard control or any associated work.

6. Ladders and scaffolding - A sufficient number of OSHA approved and properly used and maintained ladders, scaffolds, platforms, and walkways for use during preparation, removal, inspections, and cleanup shall be provided by the Contractor.

7. Lighting - The Contractor shall supply a sufficient number of portable lighting units to provide adequate illumination (in compliance with all OSHA requirements) at all locations within the work areas.

8. Sander - Only sanders equipped with shrouded heads that are attached to HEPA

filtration vacuums will be allowed for use.

9. All circular saws, reciprocating saw and all other similar devices shall be equipped with a shrouded head and attached to a HEPA filtration vacuum.

10. Other hazard control equipment - All tools and equipment that has the potential of generating lead containing dusts shall employ local exhaust ventilation (shall be attached via hose to a HEPA vacuum). All other tools, equipment, materials, supplies, and all accessories as may be necessary to complete the requirements of the project, as specified in these documents, and required by local, state, and Federal requirements and/or guidelines, in a safe, professional, workmanlike, and efficient manner.

PART 3 - EXECUTION

3.1 EXISTING SURFACE CONDITIONS

A. Contractor shall examine all areas and conditions under which the work of this section will be performed. Contractor must correct any and all conditions detrimental to a timely, proper, professional, and safe completion of the work. Contractor shall not proceed with any work until unsatisfactory or unsafe conditions are corrected.

3.2 GENERAL REMOVAL PROCEDURES

A. The work area and items to be removed shall first be HEPA vacuumed. All visible, loose debris or dust shall be vacuumed or wet wiped clean.

B. The work area and items to be removed shall be wet misted with a water sprayer or similar device to reduce dust or particles in the air. Whenever dust can be seen in the air as a result of any hazard control work, spray wet mist the area again to reduce the levels of dust or particles in the air.

C. Conduct all hazard control and removal work in a slow, careful, deliberate manner to minimize the creation of any dust or debris and to prevent any damage to any adjacent surfaces that are to remain. Use all tools in the correct manner appropriate for their design.

D. After the substrates/components have been removed, HEPA vacuum the area behind the removed substrate/component to pick up any and all loose debris or dust.

E. All removed items that have nails or other sharp fasteners shall have the fasteners removed and/or bent over completely so they will not puncture the bags they are placed in, and/or the plastic they are covered/wrapped with.

F. Removed items must be cut into small lengths to facilitate carrying and disposal. No removed item shall be longer than 8 feet in length. All cutting shall be completed with handsaws or power saws that are equipped with a shrouded head that is attached to a HEPA vacuum or HEPA filtration system.

G. All removed substrates/components and all generated waste and debris shall be properly placed in 6-mil disposal bags or wrapped in 6-mil plastic with all seams securely sealed, so as to create an air-tight seal.

3.3 Following is a generic and non-inclusive list of typical procedures for the removal of typical hazard control components. Contractor is completely responsible for ensuring the best and most appropriate means of conducting any and all forms of lead hazard control. Contractor must refer to Attachment A for specific items to be removed:

A. Baseboards (and shoe molding if present)

B. Window Removal

All sash, trim, casing/frame, parting beads, channel guides, stools, troughs, and all other items associated in any way with any of the window system(s) shall be properly and professionally removed. All hardware shall be removed or padded to prevent puncturing the polyethylene covering. All polyethylene wrapped items shall be placed in a locked and covered, or otherwise properly secured, dumpster.

C. Door Removal

Doors and associated hardware shall be removed from the doorframe. Hinges shall be removed from the door and left with the frame. All hardware shall be removed or padded to prevent puncturing the polyethylene covering. All polyethylene wrapped items shall be placed in a locked and covered, or otherwise properly secured, dumpster.

D. Shelving Removal:

All shelving and cleats/shelf supports shall be removed, separated and properly disposed of.

E. Cabinet Removal

Kitchen, bathroom, or other specifically designated cabinets shall be removed by a process which necessitates that the Contractor carefully pry the designated cabinet(s) away from the adjoining surfaces with constant, gentle pressure to protect the cabinets and adjacent surfaces from damage. The cabinet(s) should be carefully disassembled for ease of wrapping for disposal. Counter top, if lead containing materials, shall be wrapped separately from the base cabinets. Cabinet components shall be wrapped in 4 foot long lengths, maximum.

F. Wall/Ceiling Removal

Prior to partial or full wall or ceiling removal, all trim (chair rail, baseboard, ceiling molding, etc.) present on the substrate shall be removed and wrapped in accordance with described or other applicable procedures. Any remaining fixtures, toilets, sinks, lights, light switches, medicine cabinets, receptacles, etc., shall be properly removed, decontaminated, and stored in a manner which will ensure that those items will not become re-contaminated. The Contractor shall contact LSKCK for direction as to disposition of all decontaminated and stored items. The Contractor shall take all precautions and ensure to disconnect all electric circuits, plumbing lines or other services such as fire alarms, etc., before the substrate is removed. All utility lines shall be located, completely de-energized, capped or turned off, using proper lockout/tagout procedures, at the main service entrance for the area prior to substrate removal.

The actual substrate removal process will employ the use of a cold chisel, reciprocating saw, “sawzall”, wet saw, pry bar, sledgehammer, or other appropriate device. Electrical saws must employ local exhaust ventilation. The Contractor shall remove as large a portion of material as possible at a time that can be easily managed, wrapped and carried. Caution must be exercised to prevent damage to all adjacent surfaces or existing utilities or services that will remain. All material and debris shall be containerized at a size that is easily handled and carried. Refer to Attachment A for a list of all substrate materials to be removed in accordance with professional and workmanlike procedures. All studs, blocking and other substrate structures shall remain intact, in sound condition (no member cut, moved or otherwise damaged in any manner). All substrates that are removed shall be frequently cleaned to prevent hazard control personnel from standing and working in debris. Large debris shall constantly be removed; other debris shall be shoveled or HEPA vacuumed as necessary to keep floor area clear.

G. Ceiling Molding Removal

Removal of all ceiling molding shall be accomplished by gently prying the ceiling molding away from the wall surface in such a manner to prevent damage to the wall and ceiling.

H. Wooden Door Frame and Trim Removal

All wooden door frame, fastening hardware, screws, bolts, nails, etc., shall be cut and/or removed to facilitate removal without creating extensive dust or debris and without damaging any adjacent surfaces.

I. Metal Door Frame and Trim Removal

All metal door frame and trim removal shall be completed by removing or cutting all fasteners, attachments, anchors as necessary to remove the frame and trim without creating extensive dust or debris and without damaging any adjacent surfaces. All sharp edges on any metal door frame or trim shall be taped with duct tape (or other appropriate means) as necessary to prevent puncture through the polyethylene covering.

J. Gutter/Downspout Removal

All gutters/downspouts shall be removed, along with all hangers, straps, fasteners and other associated hardware. The removed gutters/downspouts shall have duct tape (or other appropriate means) placed on any sharp or exposed edge which might puncture the polyethylene wrapping.

K. Soffit/Fascia Removal

All soffit/fascia shall be removed along with all associated trim work (if painted and/or as necessary to facilitate removal of soffit/fascia).

L. Metal Gravel Stop/Roof Edge Flashing Removal

All metal gravel stop and associated flashing and fasteners shall be removed. All sharp or bare edges shall have duct tape (or other appropriate means) placed over them as necessary to prevent puncture through the polyethylene coverings.

M. Exterior Plywood Siding, Lap Siding or Other Exterior Siding Material Removal

Remove exterior siding materials completely with all associated fasteners, flashing and other accessories. Leave remaining sheathing and/or studs clear of all fasteners and ready to receive new non-lead-based paint siding materials.

N. Stair System Component Removal

All designated stairway system components (e. g., stinger, tread, risers, balustrade, etc.) shall be properly removed. All associated hardware shall also be removed. All removed items shall be cut

into lengths that facilitate containerization and ease of carrying/handling.

34. New replacement item shall match existing items that are removed in size, shape, design, function, accessories, materials, color, texture, and all other features, except it shall be finished with non-lead containing paint or finish. See new specification section if replacement items are different from those removed.

3.5 CLEANING

A. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of all physical hazards, at all times during execution of all portions of the work.

B. The project site shall be kept free from all excessive accumulations of all waste and debris.

C. At completion of each segment of installation in a room or space, promptly pick up and remove from the working area all scrap, all debris and all surplus materials. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

D. The Contractor shall conduct a magnetic "nail drag" at the end of the project in all work areas. The magnetic nail drag shall be repeated as necessary until all loose nails or fasteners and other metal construction objects have been picked up to the complete satisfaction of LSKCK. If nails or fasteners are aluminum or some other material that will not be picked up by a magnet, then a physical search and raking of all work areas shall be conducted to pick-up all loose nails and fasteners.

3.6 INSPECTION OF EXISTING SURFACE CONDITIONS

A. Contractor shall examine all surfaces, all areas and all conditions under which any of the work of this section will be performed. Contractor must correct all conditions that may in any way be detrimental to a timely, proper, professional, and safe completion of all of the work. Contractor shall not proceed with any work until all unsatisfactory and all unsafe conditions are properly and completely corrected, to the complete satisfaction of LSKCK.

B. Contractor shall particularly observe all surfaces to determine that all surfaces are in good condition and are ready for all hazard control and finish work. Any surface to be worked on which contains any surface coatings which have poor integrity, or has any dust or debris on it, or any type of damage, shall not be worked on until all unsatisfactory and/or damaged conditions are corrected to the complete and total satisfaction of LSKCK.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up, repair and/or stabilize all surfaces (on which any work will be installed) in accordance with all requirements of this specification.

END OF SECTION

SECTION 02066 - LEAD CONTAMINATED SOIL & EXTERIOR DUST REMEDIATION

PART 1 - GENERAL

1.1 SUMMARY

All soil lead and/or dust lead hazard control must be accomplished in a manner which prevents damage to all adjacent surfaces and at all times protects the health and safety of workers, the environment, adjacent properties and occupants, and the general public. All efforts must be taken to eliminate the potential for dust releases, water runoff and contaminant migration by any means during any and all hazard control operations.

1.2 All contaminated soils and dusts, as well as all previously non-contaminated soils and/or dusts that are contaminated as result of Contractor operations, shall be properly remediated in accordance with the more stringent of all applicable laws, regulations and ordinances, the information contained within this specification section (SECTION 02066), and/or generally accepted professional work practices.

A. All work area containment shall be constructed and provided in accordance with the EPA's Clean Air Act, Section 01506, "WORK AREA CONTAINMENT", other specification sections, and all applicable local, state and federal requirements, standards, guidelines, and regulations, as applicable. Whenever a conflict in any of the above is encountered, Contractor must always comply with the more stringent requirement.

B. All worker protection shall be provided in accordance with 29 CFR 1926.62, Section 01555, "WORKER PROTECTION" of this specification and all other applicable sections.

C. If known beforehand, soil lead hazard control shall be completed before any exterior leaded dust is hazard controlled or addressed in any manner, and it shall be completed before any interior lead-based paint hazard control or interior dust lead hazard control is completed. If not known beforehand, soil lead hazard control shall take place as soon as Contractor is made aware of high soil lead levels.

D. At LSKCK's discretion, all soils will be tested by LSKCK for lead content prior to the commencement of Contractor's hazard control operations, and again after the completion of all Contractor's hazard control operations. Any and all soils that exceed the pre-hazard control soil lead levels will be remediated to the complete satisfaction of LSKCK, at the Contractor's sole expenses, with no additional costs to the LSKCK or LSKCK.

1.3 OTHER RELATED WORK:

1. Documents affecting work of this Section include, but are in no way limited to, General Conditions, Supplementary Conditions, Attachment A, Sections in Division 1 & 2, Section 02067 of this specification and as shown on the drawings (if provided).

1.4 SUBMITTALS

A. Comply with pertinent provisions of Section 01302.

B. Product data:

1. Materials list of all items proposed to be provided under this Section;

2. Manufacturer's specifications and all other data needed to prove compliance with the specified requirements;

3. All Shop Drawings in sufficient detail to show all fabrication, installation, anchorage, and interface of the work of this Section with the work of all adjacent trades;

4. All manufacturer's recommended installation, application or use procedures, which, when approved by LSKCK, will become the basis for accepting or rejecting actual installation, application or use procedures used on the work.

1.5 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen, who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills and crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.6 DELIVERY, STORAGE AND HANDLING

A. All materials shall be delivered to the project site in their original cartons or packing. All materials shall be stored in a safe, secured, temperature controlled, dry area. Heat shall be provided for all materials affected by cold weather and temperature reduction shall be provided for all materials/products affected by heat.

PART 2 - PRODUCTS

2.1. Materials

1. Signs and labels - Illuminated notification signs, visible from all angles of approach to all dwelling units, which comply with KDHE and OSHA regulations. If not specifically stated, signs shall read "Warning - Lead Work Area - Poison - No Smoking or Eating." Letters shall be in bold lettering that is at least two inches tall. Construction/regulated area caution and warning signs and barrier tape shall also be provided. When at all possible, tape shall be installed 20 feet outside and around soil hazard control or dust hazard control area. Sign shall indicate "Authorized Personnel Only" without reference to lead hazard control or dust lead remediation.

2. Soil materials - Soil for backfilling excavations or for soil replacement shall be free of debris, roots, wood, scrap material, vegetation, refuse, and frozen, deleterious or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location. Contractor shall guarantee that the total lead content of all backfill and replacement soil shall be less than 100 Parts per Million (PPM).

3. Fencing - Temporary security fencing may be required to prevent unauthorized entry into regulated area and/or lead hazard control work areas. Appropriate silt fencing/silt retainage material shall be appropriately used in accordance with the most stringent of all local, state and federal requirements and/or standards.

4. Buried Utility Warning and Identification Tape - Polyethylene warning tape manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3" minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (INTENDED SERVICE) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.

Warning Tape Color Codes

Yellow:	Electric, Gas, Oil, or other Dangerous Materials
Orange:	Telephone and other Communications
Blue:	Water Systems
Green:	Sewer Systems
White:	Steam Systems
Gray:	Compressed Air

2.2 Equipment

1. Backhoe (e.g., Bobcat) or other similar excavating machinery.

2. Carts - Constructed of opaque materials with a secure fitting lid used for transporting filled disposal bags from Load Out to temporary disposal storage facilities.

3. Cleanup equipment - The Contractor shall provide an adequate number of mops, rags, shovels, buckets, brushes, vehicle mounted broom and/or vacuum devices, spray washers, etc. to clean up soil lead debris, exterior dusts, and water as hazard control and cleaning proceeds. At least one wet/dry HEPA-filtered vacuum cleaner shall be supplied. Vacuums not HEPA-filtered and brooms that are used with dry sweeping practices are not permitted on-site.

4. Electrical power - Ground wire equipped extension cords without splices. A sufficient number of GFCI units to protect all persons using all electrical equipment.

5. HEPA vacuum(s) - The Contractor shall provide HEPA vacuums for personal decontamination, cleanup and for hazard control project site cleanup during and after hazard control.

6. Water sprayer - A water sprayer/mister (e.g., hand pump garden type, truck mounted sprayer, etc.) to wet all dust and/or debris that is generated by the hazard control or associated work.

7. Lighting - The Contractor shall supply a sufficient number of portable lighting units to provide adequate illumination (in compliance with all OSHA requirements) at all locations within the work areas.

8. Dump truck that is lined with at least two layers of 6-mil polyethylene sheeting for the transport of contaminated soil. Soil load shall be completely covered so as to prevent escape of any contaminated soil.

9. Pavement cleaning machines - vehicle mounted broom sweepers, vacuum assisted broom sweepers, vacuum pavement sweepers, and other dust lead cleaning equipment.

10. Other hazard control equipment - All other tools, equipment, and accessories as may be necessary to complete the requirements of the project, as specified in these documents, and required by local, state, and Federal requirements and/or

guidelines, in a safe, proper, professional and efficient manner. All work shall be completed in accordance with the applicable standard industry practices, utilizing best available technology and state of the art procedures.

PART 3 - EXECUTION

3.1 HAZARD CONTROL REQUIREMENTS

A. Properly control all items shown in all of the areas of Attachment A or in accordance with LSKCK requirements, meeting the following criteria:

1. Properly remove all lead contaminated soil, if shown on Attachment A, or from all LSKCK indicated areas, to a depth of at least six (6) inches and replace with new and clean soil as specified;

2. Properly mix/till all contaminated soil, if shown on Attachment A, or from all LSKCK indicated areas, to a depth of at least twelve (12) inches;

3. If soil lead levels meet or exceed 5000 ppm, the soil must be completely and appropriately abated by covering with 4” of concrete or asphalt, or by removing and replacing all contaminated soils with new soil that ahs a lead concentration that is less than 100 ppm.

B. Surface Preparation

1. Soil - Unless indicated otherwise, remove all dead trees, all stumps, all logs, all dead shrubs, and all brush within the contaminated soil hazard control area. Remove stumps entirely. Grub out matted roots over 2" in diameter to at least 18" below the existing surface.

2. Dust - Remove gross (large) debris and trash from area to be addressed prior to the proper and thorough removal of all dusts.

C. Surface Drainage - Provide for the proper and approved collection and disposal of surface and subsurface water encountered during construction. Completely drain the construction site during periods of construction to keep soil materials sufficiently dry. Provide temporary ditches, swales, and other drainage features and equipment as required to maintain appropriately dry soils. When unsuitable working surfaces exist for equipment and transport of materials, provide gravel as necessary to vehicle pathway for duration of project. Remove gravel areas and replace with new and clean soil and appropriate vegetation at completion of project. Contractor must provide for an appropriate means to

collect all silt and all other soil or drainage materials in accordance with all local, state and federal laws.

D. Underground Utilities - The Contractor shall cause to locate, identify, verify and mark the location and elevation of all of the existing utilities prior to starting construction. The Contractor shall contact the appropriate utilities for assistance in locating all existing utilities. Any time delays, civil or tort damages and/or fines for failing to properly identify existing utilities shall be the full responsibility of the Contractor, at no additional cost to LSKCK or the Owner.

E. Machinery and Equipment - Movement of construction machinery and equipment over pipes, sidewalks, driveways or any other similar items during hazard control shall be at the Contractor's risk and sole expense. Repair or remove and provide new pipes, sidewalks, driveways or any other similar items for existing items that have been displaced or damaged. All Repair or replacement work shall be at the sole cost to the Contractor, at no additional cost to LSKCK or the Owner.

3.2 SOIL REMEDIATION/EXCAVATION

A. Excavation - Excavate to contours, elevations, and dimensions indicated. Reuse excavated materials that meet the specified requirements for maximum allowable lead concentrations and for the material type required at the intended location. Keep excavations free from water. Refill with backfill and fill material and compact to 85 percent of ASTM D698 or ASTM D1557 maximum density. Unless specified otherwise, refill excavations cut below indicated depth with backfill and fill material and compact to 85 percent of ASTM D698 or ASTM D1557 maximum density.

CONTRACTOR NOTE: All excavated soil and remediated dust lead must be placed into appropriate and properly secured (e.g., lockable) containers for controlling exposures during storage and/or transport. Containers must be designed to allow for safe handling, storage, and proper disposal in compliance with the more stringent of all applicable Federal, state, and local regulations. All containers shall be lined with a minimum of two layers of 6-mil polyethylene sheeting. All resulting debris and waste must be properly disposed of in compliance with the most stringent of all applicable Federal, state and local regulations.

B. Backfilling - After contaminated soil has been excavated, "new and clean" soil must be brought in to backfill the void created during excavation. Clean soil must be sampled and tested by an NLLAP approved laboratory for total lead content prior to backfilling. Clean soil that has a total lead content less than 100 part per million (ppm) must be provided. Clean soil shall be placed in a maximum of 6" lifts. Compact areas not accessible to rollers or compactors with mechanical hand tampers. Aerate material excessively moistened by rain to satisfactory moisture content. Finish to a smooth surface by blading,

rolling with a smooth roller, or both. All backfill soils must be in sufficient quantities to allow for 2 inches of fill above existing grade, so as to allow for compaction.

C. Compaction - Determine in-place density of existing sub grade; if required density exists, no compaction of existing sub grade will be required. Density measurements specified herein are for cohesion-less materials. When cohesive materials are encountered or used, density requirements may be reduced by 5 percent. Compact underneath areas designated for vegetation and areas outside the 5' line of a structure to 85 percent of ASTM D698 or ASTM D1557 maximum density.

D. Protecting Existing Structures - Contractor shall protect all existing fences, trees and shrubs (which are to remain), buildings, sidewalks, streets, driveways, pipes, and all other project improvements against all forms of damage. Any and all damaged items shall be restored to its original condition at the Contractor's sole expense.

E. Containment - Contractor must stop all work if wind, rain or other weather factors reduce or diminish the containment of the contaminated soil. All spread of the contaminated soil or contamination resulting from lack of proper control of the contaminated soil shall be cleaned by the Contractor at his/her sole expense.

3.3 SOIL REMEDIATION - MIXING OF SOIL

A. Existing soil shall be turned over with the less contaminated cleaner and deeper soil. Provide initial plowing of soil to a minimum one-foot (12 inches) depth and then rototil, so as to thoroughly mix all soil, for final mixture. Completed mixture shall have the soil lead level reduced to less than 400 ppm for bare soil play areas or 1200 ppm for bare soil non-play areas. If soil lead level is still high, remove approximately four (4) inches of existing top surface of soil and replace with four (4) inches of new and clean soil that has lead levels less than 50 ppm.

3.4 FINISH OPERATIONS

A. Grading - Finish grades as indicated within 1/10” of 1'. Grade areas to drain water away from all structures. Grade shall drop at least 4" within the first 10' away from buildings.

B. Seeding - Scarify existing sub grade to a depth of at least 2”. Provide four (4) inches of new and clean topsoil for newly graded finish earth surfaces and areas disturbed by the Contractor. Seed shall match existing vegetation. Provide seed at 5 lbs. per 1,000 square feet or as specified by seed provider. Provide CID A-A-1909, Type I, Class 2, 10-10-10 analysis fertilizer at 25 lbs. per 1,000 square feet, or as specified by fertilizer manufacturer. Provide mulch and water to establish an acceptable stand of grass. Contractor shall

guarantee germination and grass viability for a minimum of one (1) year. All grass that fails to thrive and remain viable within one (1) year of initial seeding shall be re-seeded by the Contractor at the Contractor's sole expense.

C. Hazard Control of Unsuitable Materials – At Contractor's sole expense, Contractor shall remove from Owner's property any and all surplus or other soil material not suitable for filling or backfilling, including, but not limited to all brush, refuse, stumps, roots, timber, etc.

3.5 FIELD QUALITY CONTROL

A. Sampling and Testing by Contractor - Take the number and size of samples required to perform the following tests and provide all test results, in written form, to LSKCK within no more than five (5) business days after Contractor's receipt of analytical results:

1. Test fill and backfill material in accordance with ASTM C136; ASTM D2847 gradation limits; ASTM D1140 for material finer than No. 200 sieve; ASTM D4318 for liquid and plastic limits; ASTM D698 or ASTM D1557 for moisture density.

2. Test density in accordance with ASTM D1556, or ASTM D2922 and ASTM D3017. When ASTM D2922 and ASTM D3017 are used, verify density test results by performing an ASTM D1556 density test at a location already ASTM D2922 and ASTM D3017 tested as specified herein. Perform an ASTM D1556 density test at the start of the job, and for every 10 ASTM D2922 and ASTM D3017 density tests thereafter. Test each lift at randomly selected locations.

B. Sampling and Testing by LSKCK

1. Areas abated of exterior dust lead shall meet a clearance level criterion of 400 $\mu g/ft^2$. Should areas fail clearance level, Contractor shall continually re-clean all surfaces until surfaces pass clearance level. Additional cleaning shall be at the sole expense of the Contractor. Additional sampling/analysis shall be paid for by the Contractor in the form of a deduct change order to LSKCK, from the original contract amount.

2. Soil shall be pre-hazard control (and possible post-hazard control) sampled by LSKCK to verify lead content. All and any soil that has been contaminated as a result of Contractor operations or that which has soil lead content above that which is specified, shall be removed and replaced at Contractor's sole expense until acceptable soil lead concentrations are met. Additional sampling analysis shall be

paid for by the Contractor in the form of a deduct change order to LSKCK, from the original contract amount.

END OF SECTION

SECTION 02067 - DISPOSAL OF WASTE MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

A. Familiarity and Responsibility for Regulations

Contractors are solely responsible for being aware of, completely understanding and compliance with all applicable local, state, and/or federal regulations regarding waste disposal. Where there exists a conflict between any regulations, the more stringent regulations shall apply.

B. Disposal Handling, Storage, Transport and Costs

The Contractor and his/her employees and subcontractors shall handle all lead contaminated debris or waste in a manner that prevents exposure to workers, occupants, the general public, all others, and the environment. Waste containers shall not be dropped, thrown, ripped, or handled in any manner that may cause any lead exposure. Storage of waste shall be in a fully covered and completely secured container located in an area that is well lighted, secured and controlled. At no time will the Contractor be allowed to store more than 6000 KG of a waste on any one site. **NOTE**: All costs associated with all waste handling, security, storage, transport, and disposal shall be paid for by the Contractor.

C. Related Work

Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions, Attachment A, Sections in Divisions 1, 2, 5, 6, and 9 of this specification, and as shown on the drawings (if provided).

1.2 SUBMITTALS

A. Comply with pertinent provisions of Section 01302 - Submittals.

B. Product Data

1. Materials list of all items proposed to be provided under this Section;

2. All Manufacturer's specifications and all other data needed to prove compliance with the specified requirements;

3. Shop drawings in sufficient detail to show all fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades;

4. All of the Manufacturer's recommended installation, application or use procedures, which, when approved by LSKCK, will become the basis for accepting or rejecting actual installation, application, or use procedures used on the Work.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed, permitted, and professionally experienced in the necessary skills, crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. All materials necessary for completion of work of this section shall be delivered to the project site in their original cartons or packing. All Materials shall be stored in a safe, secured, temperature controlled, and dry area. Heat shall be provided for all materials and products affected by cold weather and temperature reduction shall be provided for all materials and products affected by heat.

PART 2 - PRODUCTS

2.1 Materials that will be considered for use include, but are not limited to

A. Polyethylene sheeting - 6-mil thick for covering non-removable items, floors, walls, ceilings, for construction barriers and wrapping objects too large to place into waste disposal bags. Opaque polyethylene shall be used for barriers on public side of enclosures. Nylon, polyester, or fiberglass reinforced polyethylene sheeting shall be used where required for outdoor barriers. Fire retardant polyethylene shall be used where the potential for fire exists.

B. Waste disposal bags - 6-mil thick polyethylene bags labeled with minimum two-inch high letters stating "Caution Lead Containing Material".

C. Disposal drums - Non-porous, sealable and lockable drums for disposal of items which could tear bags.

D. Steel drums - 55 gallon size which are resistant to chemicals. Drums shall be used for storage of liquids waiting for characterization and for disposal of waste.

E. Disposal Container - Roll-off dumpsters that are lined with a minimum of two layers of 6-mil polyethylene sheeting. Dumpster shall have solid and lockable top.

F. Carts - Constructed of opaque materials with a secure fitting lid, used for transporting filled disposal bags from load out to temporary disposal dumpster or other facility or area.

PART 3 - EXECUTION

3.1 DISPOSAL OF WASTE MATERIALS

CAUTION NOTE FOR CONTRACTORS: ***All materials, whether hazardous or non-hazardous, shall be handled, stored, containerized, secured and disposed of in accordance with all laws and the provisions of this Section and any and all other applicable federal, state, county or local regulations and guidelines. It shall be the sole responsibility of the Contractor to assure complete compliance with the more stringent of all laws and regulations relating to any and all hazardous and non-hazardous waste storage, containerization, handling, security, and disposal. All wastes shall be separated and segregated into appropriate waste streams.***

A. Disposal Requirements. The Contractor shall contact the Regional EPA, State, local and all other pertinent authorities to determine all waste and/or debris disposal requirements. The requirements of the Resource Conservation and Recovery Act (RCRA) must be complied with, as well as the most stringent of all other applicable federal, state, county or local waste plan requirements. During or after the actual hazard control, the Contractor shall not: leave debris in the yard or in near-by property; place debris into an unsecured container; incinerate debris; dump debris at any unauthorized location; place debris in any unauthorized dumpster; transport any waste or debris in non-licensed or permitted vehicles; or introduce lead contaminated (non-filtered) water onto soils, into storm sewers (shall not be poured down yard inlet or street drain) or sanitary sewers (shall not be flushed down toilet or any other household, residential or commercial type drain system), without written approval from the EPA and/or the publicly owner treatment works (POTW). The Contractor shall make all efforts to minimize the amount of waste produced (through accepted practices of waste separation/segregation, etc.). Additionally, the Contractor shall make efforts to identify and use a transport, storage, and disposal (TSD) facility that will incinerate, recycle, or reclaim all wastes, rather than having wastes sent to a landfill for whole disposal. All wastewater, clean water, and wash water shall be so labeled. All wastewater shall be labeled "filtered" (using 3 micron filter) or

"non-filtered". All non-filtered wastewater containers shall be so labeled.

B. EPA ID Numbers. Prior to hazard control, the Contractor shall contact KDHE and/or EPA to determine if EPA Hazardous Waste Identification numbers are required for any waste generated during the conduct of any and all work for this project. If required, the Contractor shall apply for an EPA identification number from the appropriate Regional EPA office, particularly if sufficient quantities of waste are generated which would meet or exceed, or is expected to meet or exceed, the regulatory definition of Conditionally Exempt Small Quantity Generator during any calendar month. The Contractor has the responsibility to coordinate this action through the State, and secure any additional numbers as required. The Contractor shall comply with the strictest requirement for waste generation, storage, security, transportation and disposal resulting from all other applicable federal, state or local regulations. On behalf of the Owner, the Contractor shall request, complete and file all additionally required local, state and federal reports (e.g., annual, bi-annual, etc.), in accordance with all local, state and federal requirements. Contractor shall provide LSKCK with copies of all reports and all communications received from and/or sent to any and all regulatory agencies regarding the issue of waste disposal.

C. Hazardous Waste Characterization. If so required by the appropriate regulatory agency, testing on lead-based painted hazard control items or hazard control waste materials shall be completed by the LSKCK. Testing shall be performed as soon as representative samples are generated. Contractor must keep LSKCK constantly advised regarding the ready availability of representative samples. Contractor requests for Hazardous Waste Characterization sample collection and analysis must be in writing to the LSKCK and Contractor must allow a minimum of ten (10) working days to obtain results once the laboratory has received samples.

CONTRACTOR NOTE: When required by regulation, additional hazardous waste characterization tests will be conducted by the LSKCK and paid for by the Contractor, if the Contractor has unnecessarily separated waste materials and/or debris, so as to create additional waste streams, or if the Contractor has consolidated waste streams and failed to appropriately and properly segregate and separate waste streams from one another. Additional samples will be paid for by the Contractor, in the form of a deduct change order to the LSKCK, at a cost of $350.00 per each and every additional sample collected and analyzed.

D. Testing of Materials. When required by regulation, samples of the following materials, as well as other materials not specifically indicated, will be tested to

determine whether or not they are hazardous:

a. Paint chips and scraping debris and/or dust;
b. Waste water - filtered and non-filtered, including all wash water;
c. Dust from HEPA filters;
d. All lead-based painted component/substrate items, such as, but not limited to; porch ceilings, gables, doors, soffits, windows, fascia boards, trim, siding, and other items painted with lead-based paint and scheduled for removal;
e. Plastic sheets, duct tape, or tape used to cover floors or other services during the lead-based paint hazard control;
f. Solvents and caustics used during the hazard control process (if any);
g. Rags, sponges, mops, scrapers, HEPA vacuum filters, and other materials used for hazard control, and clean up;
h. Soil or exterior dust.
i. Disposable work clothes and respirator filters; and,
j. Any other items contaminated with lead-based paint or items produced as a result of lead-based paint hazard control activity.

E. Storage, Inspection and Record Keeping Requirements. Any item found to be hazardous, by way of testing, shall be kept in a secured area and lockable container that is inaccessible to all persons other than hazard control personnel. All hazardous waste shall be labeled "Lead Containing Hazardous Waste" and a date that the Contractor first began to collect waste in that container. All hazardous and non-hazardous waste shall be kept in separate containers. All hazardous waste shall be stored, handled, transported, and disposed of in a manner to meet the most stringent of all federal, state, and local requirements. The Contractor shall, on at least a weekly basis, inspect all waste containers to ensure that the containers and the container integrity are sound and continue to be appropriate for the wastes stored in the containers. The Contractor shall keep a journal which records the results of all container inspections conducted and includes the dates and times of the inspection, as well as the name of the individual(s) conducting the inspections.

3.2 REGULATIONS

Whether waste is designated hazardous or non-hazardous, the Contractor will be required to comply with most stringent of all requirements which apply to waste handling, storage, security, shipment, disposal, or all other items related to lead containing materials and/or lead-based paint.

3.3 TRANSPORTATION

A. If for any reason waste is determined to be hazardous, if the Contractor is not a RCRA/DOT/EPA/KDHE certified Hazardous Waste Transporter, the Contractor shall retain the services of a properly certified, permitted and licensed transporter to move the waste. The Contractor shall require the certified permitted and licensed hazardous waste transport firm to follow all DOT, EPA and any/all other federal, state, and local applicable regulations. The Contractor shall submit (as stated in the Pre-Work Submittals) to the LSKCK, the disposal firm's qualifications to perform the work as specified herein. The Contractor shall be responsible for all actions of the waste hauler as pertaining to waste handling, removal, transport, and disposal under this Section and all EPA, DOT, KDHE, and all other applicable regulations.

B. Waste Containers

The Contractor will comply with the requirements of this specification, as well as all applicable EPA, KDHE and DOT regulations for disposal containers. The Contractor shall contact the Federal, State and local authorities to determine their criteria for containers. In the case of any conflict in regulations or this specification, the more stringent requirements shall apply. All waste containers shall be labeled with the appropriate name or designation of contents and date which materials were placed first into the container.

1. The location of waste containers on-site shall be coordinated subject to LSKCK's approval.

2. The waste containers shall be solid, enclosed and lockable containers lined with at least two layers of 6-mil polyethylene sheeting. All containers shall be locked and secured at all times, except when loading or unloading.

3.4. EMERGENCIES

A. Contractor shall complete the following tasks in the event of an emergency:

1. Contact local fire, police, hospitals or local emergency response teams and inform those agencies of the type of hazard control activity at the project site and ask for assistance in the event of an accident;

2. Have an immediate means of communication with a regulatory agency in the event of an emergency;

3. Keep a list of locations and phone numbers of regulatory and emergency response agencies (i.e., police, fire, EPA, health department, hospital, emergency response team, etc.) on –site, in an area that is known to all on-site personnel;

4. Train all employees to deal with types of accidents to be encountered at the project site, including hazardous material accidents. When so requested, be able to provide documentation to the LSKCK that employees have been trained in job site safety and emergency response;

5. Have a person on-site at all times, who is the emergency coordinator to ensure that emergency procedures are carried out in the event an emergency arises;

6. Keep and maintain a "right to know" manual at the project site containing all MSDS for all materials used on-site that is in an easily accessible location that is known to all personnel on-site;

7. Keep and maintain suitable first aid kits at the project site and work locations; and,

8. Maintain adequate water supply to adequately decontaminate workers, allow for clean-up, and to allow for a minimum of fifteen minutes of uninterrupted water flow for the purpose of eye irrigation.

3.5 DISPOSAL PACKAGING.

A. The Contractor shall place lead-based paint fragments, dust, waste, and debris produced as a result of any hazard control activity in 6-mil polyethylene (plastic) bags that are airtight and puncture-resistant, in airtight and puncture-resistant poly sheeting or other appropriate KDHE/EPA/DOT approved container. Specific items shall be packaged in the following manner:

1. Cleaning Materials. The Contractor shall place all disposable cleaning materials such as sponges, mop heads, filters, rags, disposable clothing, etc. in 6 - mil polyethylene bags and properly seal them, if after testing, those materials are determined to be hazardous. All disposal bags shall have proper labeling on them.

2. Contaminated Debris. The Contractor shall properly containerize all waste

materials and debris. In particular, the Contractor shall separate, at a minimum, label and containerize the following:

a. All paint or paint fragments removed by mechanical abrasion, vacuum blasting, surface preparation, or by any other abrasive hazard control method;

b. All paint, paint fragments, solvents or other debris removed by chemical strippers (paint removers);

c. Contaminated (i.e., used, already worn) body suits;

d. HEPA vacuum contents, filters, respirator cartridges (paint chips, dust, or other hazard control debris on plastic should always be HEPA vacuumed prior to picking up the plastic);

e. Polyethylene Sheeting. The Contractor shall properly clean all surfaces and all equipment and containerize all debris, whether large or small. Prior to removing any 6-mil polyethylene sheeting, the Contractor shall lightly mist the sheeting in order to keep any non-visible dust down and fold the 6-mil polyethylene sheeting inward to contain any non-visible dust and to form tight bundles to containerize for disposal. The Contractor shall place all plastic sheeting in 6-mil thick polyethylene bags which are properly labeled and sealed; and,

f. Any other waste or debris generated as a result of any activity on a lead hazard control project.

3. Caustic debris. Materials that are caustic/corrosive which may "eat" or deteriorate plastic disposal bags shall be placed into metal or other appropriate disposal drums.

CONTRACTOR NOTE: All identified hazardous wastes or materials shall be kept completely separated and segregated from all non-hazardous materials.

3.6 WASTE REMOVAL

A. Contractor shall remove waste from the project site by completing the following tasks.

1. Vehicles. The Contractor shall ensure that all hazardous and non-hazardous waste is transported in a placarded, permitted, licensed, covered and properly

secured vehicles to the proper landfill, so as to meet all federal, state, and local requirements.

2. Container Handling. The Contractor shall carefully place the containers into the disposal truck or dumpster. The Contractor or his employees shall not throw or drop containers or handle them in any manner that will cause or potentially cause damage to the container and/or an exposure to employees, the general public, occupants of adjacent structures, any and all others, or the environment.

3. Dust or Debris. The Contractor shall ensure that the removal of all hazardous and/or non-hazardous lead-based paint hazard control items be adequately covered, containerized, bagged, or enclosed, so as to assure that no dust or debris is released.

4. Liquid Wastes. The Contractor shall contain and properly dispose of all liquid waste, including lead-contaminated wash water. The Contractor shall contact the local Publicly Owned Treatment Works (POTW) department to discuss the disposal alternatives of waste water generated during the project and dispose of it in accordance with all applicable federal, state, and local requirements.

5. Containers. The Contractor shall HEPA vacuum and shall wet wipe all waste containers to ensure that there is no residual or visual contamination present, prior to removing the containers from the work area. All waste containers shall be labeled and placarded in accordance with all applicable state, local and federal regulations.

6. Solvents. The Contractor shall place solvent residues and residues from chemical strippers in drums made out of materials that cannot be dissolved or corroded by the chemicals. Contractor must ensure that all solvents are tested to determine if they are hazardous (toxic, corrosive, ignitable, or reactive) prior to disposal. Solvents, caustic and acid waste must be segregated and not stored in the same containers.

7. Water Filtration. The Contractor shall filter all wash water, /rinse water, shower water, cleanup water or other contaminated water with a filter capable of removing particles of at least 3 micron size. Other larger micron size filters may be used, prior to final 3 micron filtration. Properly dispose of filters in accordance with the most stringent of all applicable regulatory requirements. Should the filtered water have a lead concentration, which meets or exceeds the POTW disposal criteria, the Contractor shall continue to filter all liquids until analysis indicates lead concentrations less than the applicable POTW

requirements.

END OF SECTION

SECTION 05582 - METAL ENCLOSURES

PART 1 - GENERAL

1.1 SUMMARY

A. Provide miscellaneous metal work shown on the drawings (if provided), as shown on Attachment A, as indicated by LSKCK, as specified herein, and as needed for a complete, proper and professional installation.

B. The term "enclosure" as used in this Specification Section refers to a process that makes lead-based paint (LBP) on various surfaces or items inaccessible and airtight because of coverings made of Metal that are placed over the LBP surfaces or items, which are mechanically affixed and attached with adhesives.

C. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Sections in Division 1 of these Specifications, and Section 02067, "Disposal of Waste Materials."

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 "Submittals".

1.3 Refer to Attachment A to determine the exact and specific components requiring Metal Enclosure. The types of Metal Enclosure items can include, but are not limited to, the following:

A. Columns
B. Exterior window trim, sills, stools, troughs, and other window parts
C. Exterior lap siding and other siding
D. Gutters and downspouts
E. Flashing
F. Filler panels, closures and trims
G. Door frames
H. Mullions
I. Fascia
J. Soffits
K. Porch ceilings
L. Corner guards

1.4 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen, who are thoroughly trained, certified/licensed and professionally experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Perform shop and/or field fabrication required in connection with the work of this Section in strict accordance with pertinent recommendations of the Metal and Air Conditioning Contractors National Association (SMACNA).

C. Perform Metal works in cooperation with other trades. Verify size, location and placement of miscellaneous Metal work prior to fabrication. Coordinate field measurements and shop drawings with fabrication and shop assembly.

D. Pre-assemble items in the shop to the greatest extent possible, so as to minimize field splicing and assembly of units at the project site. Disassemble units only to the extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

E. Furnish all necessary inserts and anchoring devices that are necessary for a complete and proper installation of miscellaneous Metal work, regardless of the substrate material of the surface to be enclosed. Coordinate delivery with other work to avoid delay.

1.5 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident’s operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.6 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide materials that have been selected for their surface flatness, smoothness and freedom from surface blemishes wherever exposed to view. Exposed-to-view surfaces that exhibit pitting, seam marks, roller marks, "oil canning", stains, discolorations, or other imperfections on the finished units will not be acceptable.

B. Comply with the latest issue of the standards listed. Comply with section and specification requirements of standard as is pertinent in installation.

Siding Material: ASTM B 209, Alloy 3105, Temper H-14, .024 thickness minimum.

Aluminum Sheet: ASTM B 209, Alloy 3105, Temper H-14, with temper and thickness as required for forming (or specific use), or as otherwise recommended by the metal producer to provide the required finish and installation. Fascia fabrications shall be .022 or thicker; soffits and other miscellaneous trim members shall be .017 or thicker.

2.2 FASTENERS

A. As required by manufacturer, provide fasteners of same metal as covering metal or other non-corrosive metal as recommended by manufacturer. Finish of heads or other exposed parts of fasteners shall match material being fastened.

B. As required by manufacturer, provide straps, plates and brackets as required for support and anchorage of the fabricated items to adjacent surfaces.

C. As required by manufacturer, provide metal accessories including metal clips, straps, anchoring devices and similar accessory units as required for installation of work, matching or compatible with the material being installed, non-corrosive, and of the size and gauge required for performance.

2.3 FACTORY PAINT

A. Metal primer paint. For aluminum, provide Zinc Chromate B (FS TT-P-645 or TT-P-666). All primer shall be non-lead containing or shall have no more than the industry standard for lead in paint and in no case more than .06 percent lead by weight. The amounts of lead shall be verified in a signed statement by manufacturer prior to any installation of any painted items.

B. Clean aluminum surfaces to be shop primed with inhibited chemicals, followed by an acid-chromate fluoride-phosphate conversion coating treatment or use manufacturer's standard process.

C. Factory-applied baked enamel finish. Alkyd enamel FS TT E-489, Class B or manufacturer approved standard finish. All paint shall be certified to be lead-free by the manufacturer or below .06 percent lead by weight as a maximum content.

D. Bituminous Paint SSPC Paint 12 (cold applied asphalt mastic) or similar treatment shall be applied where dissimilar metals come in contact.

2.4 ADHESIVES

Adhesives for bonding metal coverings to the existing surfaces shall be a permanently flexible type such as "Pheno-Seal" or as recommended by the manufacturer of the metal enclosure materials. The adhesive shall be spread evenly and completely on the surface to have a metal closure or metal covering installed. Adhesive shall be applied as necessary to securely attach the covering.

2.5 CAULKING

Caulking as recommended by the metal covering material manufacturer shall be installed to seal at all edges, all joints and all connections in the metal coverings. Caulking shall be installed in a manner to make the coverings "airtight" on the surfaces to which they are installed.

2.6 FABRICATION

A. Fabricate items from the material, gages and finishes shown or specified. If not shown, fabricate from minimum 20 gauge sheets. Provide heavier metal guages, stiffeners, or metal backing, if necessary, to prevent "oil canning" or to provide sufficient strength to the fabricated items and as required for the complete and proper installation.

B. Form items in maximum lengths and keep joints to a minimum. Do not expose cut edges of Metal except as shown. Fold back exposed ends of unsupported Metal to form a 1/2" wide hem on the concealed side, or ease exposed edges with backing to a radius of approximately 1/32" or otherwise treat cut edges to prevent a sharp edge and present a good appearance. Form items with flat, flush surfaces, true to line and level.

C. Fabricate with accurate angles and surfaces that are true to required lines and levels. Form exposed connections with hairline joints using concealed fasteners whenever possible.

D. Provide gaskets of closed-cell sponge neoprene or mastic sealing tape as required for air-tight

installation. All gaskets shall provide a continuous seal at abutting surfaces and shall be concealed from view.

E. Protect metal from corrosion or galvanic action by application of heavy coats of bituminous paint on surfaces that will be in contact with concrete, masonry or dissimilar metals.

PART 3 - EXECUTION

3.1 EXISTING SURFACE CONDITIONS

A. Contractor shall examine all areas and conditions under which the work of this section will be performed. Contractor must correct any and all conditions detrimental to a timely, proper, professional, and safe completion of the work. Contractor shall not proceed with any work until unsatisfactory or unsafe conditions are corrected.

B. Contractor shall particularly observe all surfaces, items and/or components to be addressed, so as to determine that the surfaces are in good condition. Any surface to be worked on which contains peeling surface coatings or has dust or debris on it or any other type of damage shall not be worked on until properly corrected.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up or stabilize all surfaces (on which his work will be installed) in accordance with all requirements of this Specification and all applicable standard industry practices.

3.2 CORRECTION OF EXISTING LEAD-BASED PAINT CONDITIONS

A. Contractor shall correct to make safe all existing lead-based paint (LBP) where his work is to be installed. Safe corrections or stabilization of existing LBP shall comply with all sections of this Specification as applicable.

B. Contractor shall correct or remove lead-based paint or make provisions for working on lead contaminated soil or other surfaces near and at his work site.

C. Prior to starting any work on any surfaces, Contractor shall as a minimum complete the following:

1. All paint surfaces that have peeling or flaking paint shall be scraped with wet methods to remove all peeling or flaking paint. Lead removing agents may be added to water to facilitate scraping. Damaged areas 3"x 3" and larger shall be repaired prior to starting work. No scraping work shall be completed until the containment is operable and all worker

protection as required by specifications is in-place and is being properly used.

D. Warning labels stating "CAUTION, SURFACE CONTAINS LEAD-BASED PAINT" shall be permanently affixed to all surfaces prior to being enclosed. Labels shall be of a highly visible color and shall be a minimum of 3"x 5" and placed every 4 square feet in all directions across the substrate being enclosed.

E. Prior to working on existing ground or other adjacent surfaces to the Contractor's working area, the Contractor shall cover the ground with clean 6-mil. polyethylene to at least fifteen (15) feet from the work surface, as space allows. Polyethylene shall not be reused from work location to work location; new material must be installed at each location.

3.3 COORDINATION

A. Coordinate as required with all other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.

3.4 INSTALLATION

A. General:

1. Except as otherwise indicated or specified, comply with manufacturer's installation instructions and recommendations and with SMAGNA "Architectural Metal Manual" where applicable. Conceal all fasteners as practical. Install work with lap joints and seams which will form an airtight enclosure. The flanges of new materials that abut a wall must be made long enough to scribe and fit snug and trim to the wall. Any irregularities, bulges or voids in metal must be blocked or compressed such that enclosure is fully supported and dimple resistant.

2. Set work accurately into position, plumb, level, tight, true and free from rack.

3. Anchor firmly into position. Provide for thermal expansion as necessary.

4. Provide concealed gaskets, flashing, caulking, fillers and insulations, and install as the work progresses to make the installations weather-tight or sealed airtight.

3.5 CLEAN-UP

A Contractor shall clean all installed finished surfaces free of all spots, paint, oil, marks, dirt or smudges.

B. Contractor shall touch-up paint any scratch or minor finish damaged areas. All touch-up paint shall meet with the full approval of the Owner and/or LSKCK.

C. Contractor shall remove all debris, materials, tools, and equipment from the site at the completion of the project and prior to the final pay request being approved. The project site shall be kept free from all excessive accumulations of all debris and wastes.

D. The Contractor shall conduct a magnetic "nail drag" at the end of the project in all work areas. The magnetic nail drag shall be repeated as necessary until all loose nails and fasteners and other metal construction objects have been picked up to the satisfaction of the Owner and LSKCK. If nails or fasteners are aluminum or some other material that will not be picked up by a magnet, a physical search and raking of all work areas shall be conducted to pick up all loose nails and fasteners.

E. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of physical hazards, at all times during execution of all portions of the work.

F. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

3.6 WARRANTY

All aluminum or other siding, all enclosure materials or all other metallic and non-metallic coverings, including all workmanship and materials, shall be guaranteed by the Contractor to be free of defects, failures and flaws for a period of at least one (1) year from the date of substantial completion. All defective material or workmanship shall be repaired free of charge to LSKCK, to the complete satisfaction of the Owner and/or LSKCK, and shall be painted and otherwise trimmed and finished to match the existing construction, in a professional and workmanlike manner.

END OF SECTION

SECTION 06106 - WOOD ENCLOSURES

PART 1 - GENERAL

1.1 SUMMARY

A. Provide plywood paneling or Wood Enclosures as shown on the drawings (if provided), as shown on Attachment A, as specified herein, and as needed for a complete, proper, workmanlike, and professional installation.

B. The term "Enclosure" as used in this Specification Section refers to a process that makes interior and/or exterior lead-based paint (LBP) on walls and other various surfaces/items inaccessible and airtight. Plywood paneling or other LSKCK acceptable wood products are placed over the LBP surfaces or items, or on furring strips (e.g., “nailers”) that are placed over LBP surfaces and mechanically affixed and attached with adhesives.

C. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, all Sections in Division 1 of these Specifications, Section 02067, “Disposal of Waste Materials”, Section 06402, “Carpentry and Trim Work”, and Section 09953, “Physical Removal of Leaded Surface Coatings.”

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 "Submittals".

B. Product data: If so requested by LSKCK and within submittal schedule period, the Contractor/Installer of plywood paneling/.wood enclosure shall submit:

1. Materials list of all items proposed to be provided under this Section;

2. All Manufacturer's specifications and other data needed to prove compliance with the specified requirements;

3. All Shop Drawings in sufficient detail to show fabrication, installation, anchorage and interface of the work of this Section and with the work of adjacent trades;

4. All Manufacturer's recommended installation procedures which will become the

basis for accepting or rejecting actual installation procedures used on the work.

5. Submit Manufacturer's standard color and texture selection chart and certification of lead-free finish.

6. Submit 2 samples, 6" square, of each type and color of plywood paneling or other wood product types. Samples will be reviewed for color and texture only. Compliance with all other requirements is the exclusive responsibility of the Contractor.

7. Flame spread and fire rating certification indicating the plywood paneling meets the applicable requirements of Kansas City, Kansas, Unified Government of Wyandotte County, Kansas, IBC, IRBC, BOCA and/or State of Kansas building codes for the application intended.

1.3 DESCRIPTION OF WORK

A. The extent of each type of wood paneling or wood product is shown on Attachment A

1. The locations to receive plywood paneling of the color and type indicated or wood enclosures as indicated, are shown on Attachment A:

B. The types of wood paneling and plywood required under this section include, but are not limited to, the following:

1. Pre-finished hardwood plywood paneling.
2. A/C Grade, CDX, Western Red Cedar

C. The type of dimensional lumber wood to be utilized and the installation of the wood products shall also be in accordance with Section 06402, “Carpentry and Trim Work”

1.4 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained, certified/licensed and professionally experienced in the necessary crafts and skills that are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Perform wood enclosure and plywood paneling installation in cooperation with other trades. Accurately locate all electrical boxes and other types of cut-outs required in paneling and all

other wood products.

C. Furnish all inserts, anchoring devices and fasteners required for installation. Coordinate delivery with other work to avoid delay.

1.5 DELIVERY, STORAGE AND HANDLING

A. Store all materials in an enclosed, dry, heated, secured storage area. "Block-up" paneling and all wood products off of the floor to allow air to circulate.

B. All panels and all other wood products shall be delivered to the site with at least 4-mil protective film over the finish that shall remain in place until the entire installation is complete.

1.6 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.7 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Glue/Adhesive: Except where indicated to be "waterproof," glue joints and laminate veneers with "water-resistant" glue or "Liquid Nails".

B. Pre-finished Hardwood Plywood Paneling (WdPnl): Provide random-matched veneered 1/8" thick hardwood plywood, Premium Grade (veneer), with manufacturer's standard factory finish. Provide 4'-0" wide panels of length required for work. Species of wood shall be oak unless specified or approved otherwise.

1. Pre-finish plywood paneling shall be as manufactured by (provided product meets all requirements of specifications):

a. Georgia Pacific
b. Townsend
c. Boise Molding and Lumber
d. Weyerhaeuser

C. Fire Retardant Treatment: Provide fire-retardant treatment as required by all applicable building codes, including Kansas City, Kansas, Unified Government of Wyandotte County, Kansas, IBC, IRBC, BOCA and/or State of Kansas building codes.

D. Dimensional Board Lumber: Provide straight, true, level and best quality lumber. Species of wood shall be white pine unless specified or approved otherwise (see other requirements in Section 06402 – Carpentry and Trim Work).

2.2 FASTENERS

A. Provide non-corrosive ring nails with factory finished heads matching panels.

B. Provide metal accessories including anchoring devices, touch-up coloring and other accessories as required for the professional installation of work as recommended by panel manufacturer.

2.3 ADHESIVES/GLUE AND CAULKING

A. Provide adhesive, glue and caulking as recommended by pre-finish panel manufacturer, so as to form a completely airtight seal.

2.4 FURRING MATERIALS

A. 1"x 2" wood furring materials (fire rated as required) or 3/4" metal hat channels as applicable.

PART 3 - EXECUTION

3.1 EXISTING SURFACE CONDITIONING

A. Contractor shall examine all areas and conditions under which the work of this section will be performed. Contractor must correct all conditions detrimental to a timely, proper and safe completion of the work. Contractor must stabilize severely damaged lead-based paint (LBP). Contractor shall not proceed with any work until unsatisfactory or unsafe conditions are corrected.

B. Contractor shall particularly observe all surfaces to determine that the surfaces and substrates are in good condition. Any surface to be worked on which contains peeling surface coatings or has dust, oils or debris on it, is not structurally sound, or if it has any other type of damage, shall not be worked on until corrected. Contractor shall verify with LSKCK whether the clean up and/or hazard control of the LBP will be performed by others prior to his work.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up or stabilize the surfaces (on which his work will be installed) in accordance with all requirements of this specification.

3.2 CORRECTION OF EXISTING LEAD-BASED PAINT CONDITIONS

A. Contractor shall correct to make safe all existing lead containing materials (LCM) where his/her work is to be installed. Safe corrections or stabilization of existing LCM shall comply with all sections of this specification and KDHE requirements, as applicable.

B. Contractor shall correct or remove lead containing materials or make provisions for working on lead contaminated soil or other surfaces near and at his/her work site.

C. Prior to starting any work on any items or surfaces, Contractor shall as a minimum complete the following:

1. All paint surfaces that have peeling or flaking surface coatings shall be scraped with wet methods to remove all peeling or flaking paint. Lead removing agents may be added to water to facilitate scraping. Areas 3"x 3" and larger shall be repaired prior to starting work. No scraping work shall be completed until the containment is operable and all worker protection as required by OSHA and these specifications are

being used.

D. Warning labels stating "CAUTION, SURFACE CONTAINS LEAD-BASED PAINT" shall be affixed to all surfaces prior to being enclosed. Labels shall be of a highly visible color and shall be a minimum of 3"x 5" and placed every 4 square feet in all directions across the substrate being enclosed.

3.3 COORDINATION

A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.

3.4 INSTALLATION

A. GENERAL

1. Nail or screw plywood paneling and all other wood products to supports in accordance with manufacturer's instructions, using ring nails with factory-finished heads matching panels. Arrange and cut panels as required so edges (and grooves, if any) fall over supports. Nail along supports at 8" o.c. or as recommended by panel manufacturer.

2. Use 1"x 2" wood furring strips or 3/4" metal hat channels as is applicable for installation and building code requirements.

    a. Panels shall be glued directly to wall surfaces unless wall surfaces are uneven.
    b. All abutment edges, seams and joints shall be back-caulked.
    c. Use furring material as necessary to install level and true plywood paneling wall surface.

3. Glue and adhere panels and all other wood products with products as recommended by the manufacturer.

4. Set all work accurately into position, plumb, level, tight, and true. Cut all required openings in paneling or other wood product accurately. Cut panels and all other wood products to meet tightly with one another and with existing trim and other materials with which it must abut.

5. Repair all damage of finish. Replace panels and all other wood products with finish

damage as directed by LSKCK.

6. All carpentry work and dimensional wood lumber shall be as shown, as well as installed as shown, in Section 06402, Carpentry and Trim Work

3.5 CLEAN-UP

A Contractor shall clean all installed finished surfaces free of all spots, marks, dirt or smudges.

B. Contractor shall touch-up paint any scratch or minor finish damaged areas. All touch-up paint shall be approved by the Owner and/or LSKCK prior to use.

C. Contractor shall remove all debris, materials, tools, and equipment from the site at the completion of the project and prior to the final pay request being approved. The project site shall be kept free from all excessive accumulations of wastes and debris.

D. Contractor shall remove protective film completely for paneling surfaces and clean as necessary.

E. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of physical hazards, at all times during execution of all portions of the work.

F. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

G. The Contractor shall conduct a magnetic "nail drag" at the end of the project in all work areas. The magnetic nail drag shall be repeated as necessary until all loose nails and fasteners and other metal construction objects have been picked up to the satisfaction of the Owner and LSKCK. If nails or fasteners are aluminum or some other material that will not be picked up by a magnet, a physical search and raking of all work areas shall be conducted to pick up all loose nails and fasteners.

END OF SECTION

SECTION 06107 - VINYL ENCLOSURE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Provide vinyl coverings for those areas shown on Attachment A, as specified herein, and as needed for a complete, proper and professional installation.

B. Related Work

1. Documents affecting work of this Section include, but are not limited to, General Conditions, and other pertinent sections of these specifications.

1.2 QUALITY ASSURANCE

A. The Contractor shall use an adequate number of skilled, certified/licensed and professionally experienced workmen who are thoroughly trained and experienced in the installation of vinyl siding and vinyl building components, and other necessary crafts and who are completely familiar with the requirements and methods needed for proper performance of lead-safe work practices, as well as the work of this Section. LSKCK may recommend that the Contractor remove from the project site any worker who, in the LSKCK's opinion does not possess the necessary skills to complete the work as specified.

B. The Contractor shall comply with the most stringent of all applicable federal, state, and local laws, codes, and regulations.

1.3 SUBMITTALS

A. Provide submittals in accordance with Section 01302 - "Submittals".

B. Product data: If so requested by LSKCK, the Contractor shall submit to the LSKCK the following information:

1. Materials list of all items proposed to be provided under this Section;

2. All Manufacturer's specifications and all other data needed to prove compliance with the specified requirements;

3. Samples of the full range of colors and all patterns available from the proposed

manufacturer in the specified range and indication of all matching fasteners and accessories; and,

4. All Manufacturer's recommended installation procedures indicating fasteners to be used and conformance with local building codes and manufacturer's required fastening (nails, screws, glue, etc.) requirements which, when approved by LSKCK, will become the basis for accepting or rejecting actual installation procedures used on the work.

C. Mock-ups:

1. If so requested by LSKCK and at an area of the site approved by LSKCK, provide a mock-up panel of work of this Section.

   a. Make the mock-up panel approximately four feet high by three feet wide;

   b. Provide one mock-up panel for each color and pattern of vinyl exterior covering used on the work;

   c. The mock-ups may be part of the work, and may be incorporated into the finished work, when so approved by LSKCK; and,

   d. Revise as necessary to secure LSKCK approval.

2. The mock-up panels will be used as datum points for comparison with the remainder of the work of this Section for the purpose of acceptance or rejection.

3. If the mock-up panels are not permitted to be part of the finished work, completely demolish and remove them from the job site upon completion and acceptance of work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Delivery

Materials shall be delivered only during normal working hours of 8:00 a.m. to 4:30 p.m. Monday through Friday. Deliveries shall be scheduled to minimize space and time requirements for storage of materials and equipment on the site.

B. Storage

Keep materials under cover; temperature controlled and dry. Protect against exposure to any weather and all contact with damp or wet surfaces. Materials shall be stored in an area of the project site acceptable to LSKCK; however, this shall be done at sole risk to the Contractor. Materials shall be stored out of the way of traffic and stacked up off the ground surface for air circulation.

C. Handling

Deliver to LSKCK for use in future modifications, an extra stock of approximately 5% of each color and pattern of material used in work of this Section, packaging each type of material separately, distinctly marked and adequately protected against deterioration. Provide an adequate number of additional required fasteners in addition to the basic material.

1.5 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.6 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 VINYL EXTERIOR SIDING AND/OR COVERINGS

A. Where indicated on the Drawings (if used) and/or specified in these documents, provide the products in the colors approved by the Owner and/or LSKCK from the manufacturer's

standard colors. Vents in the soffit coverings shall be provided as required by the drawings (if used), as required by applicable building codes, as required by standard industry practices, and as required to match the existing construction. Vents shall have insect and bird screen installed on them.

B. Exterior Vinyl siding and/or coverings shall be solid vinyl (minimum thickness 0.040" for siding, 0.038" for soffit), extruded polyvinyl chloride (PVC) compound as defined in ASTM D3679-81a, "Standard Specification for PVC Siding", with all associated fasteners as required by the manufacturer and local building codes. All vinyl products used shall be certified by the manufacturer to be lead-free.

C. If appropriate, based upon construction and existing conditions, vinyl jamb liners shall be installed over existing window side jambs, after complete and proper removal of existing parting beads/channel guides. If sashes are reused, remove all surface coatings from existing sash rails and stiles, prior to re-installation. Removal of any trim shall be in accordance with Section 02065 and removal of any surface coatings shall be in accordance with Section 09953, as well as all other applicable Sections of this specification.

C. Manufacturers

1. Manufacturers offering products that comply with the requirements for vinyl exterior siding and/or coverings shall include, but are not limited to, the following:

    a. Alcoa Corporation;
    b. Certanteed Corporation; and,
    c. Multiblends, Inc.
    d. Napco

    Other products to be provided must be equal in quality and warranty. All "equal" products must be submitted for approval to LSKCK at least ten (10) days prior to bids being taken. Written approval of submitted alternatives will be given to all plan holders of record.

D. Certification of Conformance

1. All vinyl exterior covering products shall meet or exceed the following specifications and/or code approvals:

a. ASTM 3679-81a, PVC Siding Specification;
b. ASTM E-84, Test Methods for Surface Burning Characteristics of Building Materials;
c. ASTM D-635, Test Methods for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position;
d. ASTM D02843, Test Methods for Density of Smoke from Burning or Decomposition of Plastics;
e. Building Officials and Code Administration International, Inc. (BOCA) Research Report No. 86-36;
f. International Conference of Building Officials (ICBO) Report No. 3985; and,
g. State of Connecticut Board of Materials Review, File No. BMR 008-82.

2.2 OTHER MATERIALS

A. Provide other materials, fasteners and accessories not specifically described but required for a complete, professional and proper installation as required by the manufacturer and local building codes, as selected by the Contractor, subject to the approval of the LSKCK. All accessories used with vinyl exterior siding and/or coverings shall be the same quality vinyl and produced by the same company as the other vinyl products being used.

PART 3 - EXECUTION

3.1 INSPECTION

A. Contractor must examine all areas and all conditions under which any vinyl exterior covering is to be applied and immediately notify LSKCK in writing of any conditions that may in any way be considered to be at all detrimental to the proper and timely completion of the work. Do not proceed with work until any and all unsatisfactory conditions have been corrected in a manner acceptable to LSKCK for proper installation and manufacturer's warranty coverage.

B. Make moisture content tests of substrate by use of an electronic moisture meter approved by LSKCK, and verify that substrate moisture content of wood does not exceed 7% average, with a range permitted in individual pieces from 5% to 15%.

3.2 PREPARATION

A. Wood

1. Make the surface completely smooth; set nail heads and fill with waterproof filler, sanding smooth with the adjacent surfaces; verify proper moisture content.

2. Seal knots, pitch, and sap streaks with one coat of 2 lb. cut white shellac or similar approved sealer, covering the entire surface.

3.3 INSTALLATION OF VINYL EXTERIOR COVERING

A. Prior to starting work, quantify and verify governing dimensions at building. Examine, clean, and repair if necessary, any adjoining work on which this work in any way is dependent for its proper installation.

B. Sequence:

1. Use vinyl in consecutive numbered sequence of their manufacture (if any).

C. Handle the vinyl exterior covering in strict accordance with the manufacturer's recommendations, and all applicable building codes.

1. Follow the manufacturer's printed instructions for installation, as well as all applicable building codes that would apply.

2. The field application of any and all vinyl soffit, fascia, porch ceilings, and gable ends or any other surface to be enclosed with Vinyl shall be in accordance with the best practice, with all joint members true and plumb.

3. All vinyl will be provided with elongated nailing slots on the nailing flange where applicable. Ends of horizontal panels will be factory notched so as to form an overlapping joint.

3.4 CLEANING

A. Upon completion, newly installed vinyl siding or other coverings shall be cleaned with a damp cloth to remove any surface dirt, oil, smudges, fingerprints and all other debris.

B. Inspect all seams, verifying that precise match has been achieved, and correcting mismatch of color and/or pattern as necessary to secure LSKCK approval.

C. Verify that installed vinyl exterior covering meets or exceeds the quality of installation

achieved in the approved mock-up panels.

D. The Contractor shall conduct a magnetic "nail drag" at the end of the project in all work areas. The magnetic nail drag shall be repeated as necessary until all loose nails and fasteners and other metal construction objects have been picked up to the satisfaction of the Owner and LSKCK. If nails or fasteners are aluminum or some other material that will not be picked up by a magnet, a physical search and raking of all work areas shall be conducted to pick up all loose nails and fasteners.

E. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of physical hazards, at all times during execution of all portions of the work.

F. The project site shall be kept free from all accumulations of all debris and all wastes created as a result of any hazard control related and /or construction-related work efforts.

G. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Properly remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

3.5 WARRANTY

All vinyl exterior covering workmanship and materials shall be guaranteed by the Contractor to be free of defects, failures, and flaws for a period of at least one (1) year from the date of substantial completion. All defective material or workmanship shall be immediately repaired free of charge to the Owner and LSKCK, and shall be painted and otherwise trimmed and finished to match the existing construction, in a professional and workmanlike manner.

END OF SECTION

SECTION 06402 - CARPENTRY AND TRIM WORK

PART 1 - GENERAL

1.1 DESCRIPTION

A. General

Provide wood, nails, screws, bolts, and all other items as needed, and perform rough and finish carpentry for the hazard control construction as specified in this Section and as indicated on the drawings (if provided), and as needed for a complete, proper and professional installation. Carpentry includes all rough and finish carpentry work.

1. Provide Carpentry, component replacement and/or trim replacement materials or covers over the items indicated on ATTACHMENT A. The action (i.e., Replacement, Enclosure, etc.) is listed next to the item or area Shown on Attachment A.

2. Unless noted otherwise, the item or area to have work shall receive the same type of construction as the original construction (in the case of replacement) and if being covered, shall be covered with the following:

    a. 3/4" solid wood stock over the existing solid wood stock.

    b. 3/4" plywood (meeting all requirements of specification) over porch floor/deck surfaces.

    c. 1/2" plywood (meeting all requirements of specifications) over other plywood of similar dimension or slat wood (e, g., tongue and groove board, beaded car siding, etc.) product areas.

    d. 1/4" plywood (meeting all requirements of specifications) over stair treads and risers.

B. Related Documents

1. Documents that apply to this work include, but are not necessarily limited to, drawings (if provided) and general provisions of the Contract, including General and Supplementary Conditions, and sections as applicable from Divisions 1,2, 5,

6,and 9.

1.2 QUALITY ASSURANCE

A. The Contractor shall use an adequate number of skilled and certified/licensed workmen who are thoroughly trained and professionally experienced in all aspects of the carpentry crafts and who are completely familiar with the specified requirements and the methods needed for proper and professional performance of the work of this Section. LSKCK may recommend that the Contractor remove from the project site any worker who does not possess (in LSKCK's opinion) the necessary skills to complete carpentry as specified.

B. Codes and Standards

1. The Contractor shall comply with the most stringent of all applicable federal, state, and local laws, codes, and regulations.

2. The Contractor shall also comply with the following:

a. Western Wood Products Association (WWPA) Product Use Manual for the selection and use of products; and,

b. American Plywood Association (APA) Plywood Specification and Grade Guide.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Delivery

Materials shall be delivered only during normal working hours, 8:00 a.m. to 4:00 P.M., Monday through Friday, or as otherwise approved in writing by LSKCK. Deliveries shall be scheduled to minimize space and time requirements for storage of materials and equipment on the site.

B. Storage

At all times, keep all materials under cover and dry. Protect against any exposure to any weather and contact with any damp or wet surfaces. Stack all lumber, as well as all plywood and all other panels; provide for air circulation within and around stacks and under temporary coverings, including polyethylene sheeting or similar material. Materials shall be stored in an area of the project site acceptable to Owner and/or LSKCK; however, this shall be done at sole risk to the Contractor. Materials shall be stored out of the way of traffic, and stacked up off the ground

surface to allow air circulation.

C. Handling

Use extreme care when unloading lumber, plywood, etc. (e.g., all wood products) to prevent damage, splitting, and breaking of materials.

1.4 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contractor. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.5 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide materials in the quantities needed for the professional completion of the work and meeting or exceeding the following example standards of quality:

1. Plywood: All plywood shall be a minimum of 5-ply plywood with exterior glue.

a. PORCH FLOORS: Paintable, Smooth, A-C grade, Exposure 1 (APA Rating), 3/4" thick, western red cedar. Texture and style shall match existing conditions that are to be enclosed or which were removed.

b. GABLES, SOFFITS, FASCIA, PORCH CEILINGS and SIMILAR: Paintable, Smooth, A-C grade, Exposure 1 (APA Rating), 3/8" thick if

joists are on 16" centers and 1/2" thick if joists are on 24" centers, western red cedar.

c. STAIR TREAD AND STAIR RISERS: Paintable, Smooth, A-C grade, Exposure 1 (APA Rating), 1/4" thick, western red cedar.

c. Finish side shall be mounted out (no knots or blemishes shall be exposed).

2. Siding (APA Rating) to match existing siding as approved by LSKCK.

3. Fascia board: (Size as required to match existing replaced or to cover existing) boards, western red cedar to match existing size fascia board that was removed or which is to be enclosed.

4. Metal drip edge: Minimum 24-gauge galvanized steel, brake-formed to provide 3" roof deck flanges, and 1-1/2" fascia flange with 3/8"drip at lower edge; shall match existing.

5. Metal flashing: Zinc-coated steel, ASTM A-526 and ASTM A-527, G90 hot dip galvanized; 24-gauge except as otherwise noted. Job-cut to sizes and profiles as necessary.

6. Miscellaneous Materials

a. Fasteners and Anchorages: Provide size, type, material, and finish as indicated and as required by applicable standards, complying with applicable State, Local and/or Federal Specifications for nails, staples, screws, bolts, nuts, washers, and anchoring devices. Provide metal hangers and framing anchors of the size and type recommended by the manufacturer for each use including recommended nails.

1) Where carpentry work is exposed to weather, in ground contact, or in an area of high relative humidity, provide fasteners and anchorages with hot-dip zinc (galvanized) coating (ASTM A 153).

b. Other materials: Provide other materials (such as bird and insect screen), not specifically described but required for a complete, proper and professional installation, as selected by the Contractor subject to approval of LSKCK.

PART 3 - EXECUTION

3.1 INSPECTION OF EXISTING SURFACE CONDITIONS

A. Contractor shall examine all surfaces, all areas and all conditions under which any of the work of this section will be performed. Contractor must correct all conditions that may in any way be detrimental to a timely, proper, professional, and safe completion of all of the work. Contractor shall not proceed with any work until all unsatisfactory and all unsafe conditions are properly and completely corrected, to the complete satisfaction of LSKCK.

B. Contractor shall particularly observe all surfaces to determine that the wall or all other surfaces are in good condition and are ready to receive the enclosure materials. Any surface to be worked on which contains any surface coatings which have poor integrity, or has any dust or debris on it, or any type of damage, shall not be worked on until all unsatisfactory and/or damaged conditions are corrected to the complete and total satisfaction of LSKCK.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up, repair and/or stabilize all surfaces (on which any work will be installed) in accordance with all requirements of this specification.

C. Discard units of material with defects that might impair quality of any work, and units that are too small to use in fabricating work with minimum joints or optimum joint arrangement.

D. Do not permit any materials not complying with the provisions of this section to be brought onto or to be stored at the job site.

1. Promptly remove all non-complying materials from the job-site and replace with materials meeting all of the requirements of this section, as well as all sections of these specifications.

E. Any and all lumber may be rejected by LSKCK, whether or not it has been installed, for excessive warp, twist, surface imperfections, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

3.2 PREPARATION

A. Set carpentry work to required levels and lines, with members plumb and true to line, and cut and fitted squarely and tightly.

3.3 INSTALLATION

A. Carefully select lumber pieces for installation.

1. Select individual pieces so that knots and obvious defects will not interfere with placing of bolts or proper attachment, and will allow for making of proper connections.

2. Cut out and discard defects that render a piece unsuitable to serve its intended function.

B. Installation of plywood sheeting

1. Placement:

a. Place plywood with face grain perpendicular to supports and continuously over at least two supports, except where otherwise noted on the drawings (if used).

b. Center joints accurately over supports and fasten securely, unless otherwise shown on the drawings (if used).

2. All plywood shall be properly waterproof sealed as soon as installation of an area is complete, in order to protect from all water and all moisture damage. Protect on a temporary basis, as necessary, with appropriate waterproof covering to prevent any damage.

3. As required by LSKCK, install new aluminum pre-finished (factory painted) soffit vents. Color shall be white or color to match soffit tint. Vents shall have insect and bird screen installed on them.

C. Jointing

1. Install all joints true, straight, tight, and square. Joints shall be nailed with all members assembled in accordance with the Drawings (if used), and with all applicable codes and regulations, as well as all applicable standard industry

practices.

a. Make joints to conceal shrinkage; miter exterior joints; miter or scarf end-to-end joints; and,

b. Place joints only where solid support is available.

D. Fastening

1. Install all items straight, true, level, plumb, and firmly anchored in place;

2. Nail all trim with finish nails of proper dimension to hold the member firmly in place without splitting any of the wood;

3. Nail all exterior trim with galvanized nails, making joints to exclude any water intrusion;

4. Screw, do not drive, wood screws. Screws may be started by driving and then screwed home; and,

5. Repair/replace existing or install new gutters, downspouts, roof flashing, and metal drip edges as required by specifications or as necessary. All new gutters or downspouts shall match existing. Gutters shall be seamless.

3.4 FIELD QUALITY CONTROL

A. LSKCK shall inspect the newly enclosed and replaced and associated hardware to determine compliance with the specifications.

1. The Contractor shall notify LSKCK within 24 hours of the completion of installation for each item for each building that is ready for inspection.

2. Each inspection must be requested by the Contractor to be performed by LSKCK to LSKCK's satisfaction before the next phase of work may begin. Failure of the Contractor to obtain LSKCK's approval before proceeding to any next phase (e.g., painting, final cleanup, etc.) may result in all work stopping until the Contractor replaces the non-complying work with new complying construction. No increase in contract amount or time will be allowed.

3.5 CLEANING

A. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of physical hazards, at all times during execution of all portions of the work.

B. The project site shall be kept free from all accumulations of all sawdust, all cut-ends, all extension cords, al debris, and all other hazard control related and /or construction-related wastes and materials.

C. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

D. The Contractor shall conduct a magnetic "nail drag" at the end of the project in all work areas. The magnetic nail drag shall be repeated as necessary until all loose nails or fasteners and other metal construction objects have been picked up to the complete satisfaction of LSKCK. If nails or fasteners are aluminum or some other material that will not be picked up by a magnet, then a physical search and raking of all work areas shall be conducted to pick-up all loose nails and fasteners.

3.6 WARRANTY

All carpentry workmanship and materials shall be guaranteed by the Contractor to be free of defects, failures, and flaws for a period of at least one (1) year from the date of substantial completion. All defective material or workmanship shall be repaired free of charge to LSKCK and the Owner and shall be painted, and otherwise trimmed and professionally finished to match the existing construction, in accordance with all applicable standard industry practices.

END OF SECTION

SECTION 09252 - GYPSUM WALLBOARD ENCLOSURE

PART 1 - GENERAL

1.1 SUMMARY

A. Provide gypsum drywall and accessories as specified herein, as shown on Attachment A and as needed for a complete, proper and professional installation.

B. The term "Enclosure" as used in this Specification Section refers to a process that makes lead-based paint (LBP) on various surfaces or items inaccessible and airtight because of coverings made of Gypsum Wallboard that are placed over the LBP surfaces or items and mechanically affixed and attached with adhesives.

C. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Attachment A, and Sections in Division 1, 2, 5, 6, and 9 of these Specifications, Section 02067 "Disposal of Waste Materials" and the drawing (if provided).

D. Items to be enclosed with Gypsum Wallboard are as indicated in Attachment A.

1.2 SUBMITTALS

A. Comply with pertinent provisions of Section 01302 "Submittals."

B. Product data: If so requested by LSKCK and within the submittal schedule period, the Contractor shall submit:

1. Materials list of all items proposed to be provided under this Section;
2. All Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
3. All Manufacturer's recommended installation procedures which, when approved by LSKCK, will become the basis for accepting or rejecting actual installation procedures used on the work.

C. Mock-ups:

1. If so requested by LSKCK and in an area on the site where approved by LSKCK, provide a mock-up gypsum wallboard panel on an existing wall surface.

    a. Complete one room within the project as selected by LSKCK to serve as a mock-up of the completed work for approval by LSKCK.

    b. Revise as necessary to secure LSKCK's approval.

2. The mock-up room, when approved by LSKCK, will be used as datum points for comparison with the remainder of the work of this Section for the purpose of acceptance or rejection.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen, who are thoroughly trained, certified/licensed and professionally experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver all gypsum sheetrock and all accessories in original package and store in a temperature and humidity controlled, completely dry and secure storage area, out of the way of the containment of lead hazard control work going on and any other construction activity.

1.5 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this Specification to the extent referenced and/or applicable. This is an example list and is not meant to be an all-inclusive list.

B. American Society for Testing and Materials (ASTM) (or the most current version):

C11-91 .....Standard Definitions of Terms Relating to Gypsum and Related Building Materials

C36-91.....Gypsum Wallboard

C475-89.....Joint Compound and Joint Tape for Finishing Gypsum Board

C630-91.....Water Resistant Gypsum Backing Board
C840-88.....Application and Finishing of Gypsum Board

C954-86.....Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84mm) to 0.112 in. (2.84mm) in thickness

C1002-88.....Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases
C1047-85(R 1990) ..... Accessories for Gypsum Wallboard

1.6 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.7 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 GYPSUM WALLBOARD

A. General:

1. Provide gypsum wallboard complying with the latest issue of Fed Spec SS-L-30D and ASTM C36, in 48" widths and in such lengths as will result in a minimum of joints.

2. Regular wallboard: 5/8" thick with beveled edges where existing walls are furred out to receive enclosure and 1/4" thick with beveled edges where placed directly on existing wall surface.

3. Fire-retardant wallboard: Provide type III, grade X, class 1, 5/8" thick where indicated by all applicable building codes, including, but in no way limited to, the Unified Government of Wyandotte County, Kansas and the City of Kansas City, Kansas building code.

4. Water-resistant wallboard: Provide type VII, grade W or X as required, class 2, 5/8" thick where existing walls are furred out to receive enclosure and 1/4" thick with beveled edges where placed directly on wall surface. Install water resistant wallboard in toilet rooms, bathrooms, laundry rooms, and other moisture-type areas.

5. All gypsum wallboard and all spackling materials shall be completely non-asbestos containing and shall have a signed certification by the manufacturer indicating that it is asbestos-free.

2.2 METAL TRIM

A. ASTM C1047, except form of 0.015 inch (0.39mm) thick zinc coated steel sheet or rigid PVC plastic complying with ASTM D3678.

B. Casing beads:

1. Provide channel-shapes with an exposed wing, and with a concealed wing not less than 7/8" wide.

2. The exposed wing may be covered with paper cemented to the metal, but shall be suitable for joint treatment.

C. Corner beads: Provide angle shapes with wings not less than 7/8" wide and perforated for nailing and joint treatment, or with combination metal and paper wings bonded together, not less than 1-1/4" wide and suitable for joint treatment.

D. Edge beads for use at perimeter of ceilings:
1. Provide angle shapes with wings not less than 3/4" wide.
2. Provide concealed wing perforated for nailing, and exposed wing edge folded flat.
3. Exposed wing may be factory finished in white color.

E. Furring material: Provide 3/4" hot dip galvanized or factory painted "hat" channels where 5/8" gypsum wallboard is furred out from existing wall surface.

F. Provide miscellaneous metal studs as may be required for a complete, proper and professional installation.

2.3. ADHESIVES

A. Provide adhesives as recommended by gypsum wallboard manufacturers and apply gypsum wallboard directly to existing wall surfaces, ceiling and other surfaces as may be indicated and applicable.

2.4 JOINTING SYSTEM

A. Provide a jointing system, including reinforcing tape and compound, designed as a system to be used together and as recommended for this use by the manufacturer of the gypsum wallboard approved for use on this work.

B. Jointing compound may be used for finishing if so recommended by its manufacturer.

C. All jointing compound shall be certified by the manufacturer to be non-asbestos containing.

2.5 FASTENING DEVICES

A. For fastening gypsum wallboard in place on metal studs, hat channel or existing wall surface, use flat-head screws, shouldered, specially designed for use with power driven tools, not less than 1" long with self-tapping threads and self-drilling points.

2.6 ACCESS DOORS

A. In partitions and ceilings installed under this Section, provide doors where required for access to mechanical installations, plumbing installations and electrical installations where indicated on drawings, or as required to meet existing conditions.

B. Types:

1. Unless otherwise required, provide 24" x 24" metal access doors with concealed hinges to metal frame and with Allen key lock.

2. For piercing fire-rated surfaces, provide access doors having the same fire rating as the surface being pierced.

3. For other installations, provide prime-coated steel access doors and frames for finish painting to be performed at the job site under Section 09952 of this Specification.

2.7 OTHER MATERIALS

A. Provide other materials not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of LSKCK.

PART 3 - EXECUTION

3.1 EXISTING SURFACE CONDITIONS

A. Contractor shall examine all surfaces, all areas and all conditions under which any of the work of this section will be performed. Contractor must correct all conditions that may in any way be detrimental to a timely, proper, professional, and safe completion of all of the work. Contractor shall not proceed with any work until all unsatisfactory and all unsafe conditions are properly and completely corrected, to the complete satisfaction of LSKCK.

B. Contractor shall particularly observe all surfaces to determine that the wall or all other surfaces are in good condition and are ready to receive the enclosure materials. Any surface to be worked on which contains any surface coatings which have poor integrity, or has any dust or debris on it, or any type of damage, shall not be worked on until all unsatisfactory and/or damaged conditions are corrected to the complete and total satisfaction of LSKCK.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up, repair and/or stabilize all surfaces (on which any work will be installed) in accordance with all requirements of this specification.

3.2 CORRECTION OF EXISTING LEAD-BASED PAINT CONDITIONS

A. Contractor shall correct to make safe all existing lead-based paint (LBP) where his work is to be installed. Safe corrections or stabilization of existing LBP shall comply with all sections of this Specification and/or all applicable local, state and federal requirements, as

applicable.

B. Contractor shall correct or remove all lead containing materials or make provisions for working on all lead contaminated soil and all other surfaces near and at the work site.

C. Prior to starting any work on any surfaces, Contractor shall as a minimum complete the following:

1. All surface coatings that are peeling, cracked, chipped, flaking, or in any way damaged, shall be properly, completely and professionally wet scraped and/or repaired, using proper and appropriate work practice controls and lead-safe work practices. Lead removing detergents may be added to water to facilitate scraping. All damaged areas 3"x 3" and larger shall be repaired prior to starting work. No scraping work shall be completed until the containment is operable and all worker protection, as required by OSHA and these specifications, are in place and being properly used.

D. Warning labels stating "CAUTION, SURFACE CONTAINS LEAD-BASED PAINT" shall be affixed to all surfaces prior to being enclosed. All labels shall be of a highly visible color and shall be a minimum of 3"x 5" and placed at least every 4 square feet in all directions across the substrate/area/item being enclosed.

3.3 INSTALLATION

A. General:

1. Install the gypsum wallboard in accordance with all applicable professionally accepted industry practices and with the separate boards in moderate contact but not forced into place.
2. At internal and external corners, conceal the cut edges of the boards by the overlapping covered edges of the abutting boards.
3. Stagger the boards so that corners of any four boards will not meet at a common point except in vertical corners.

B. Ceilings:

1. Install the gypsum wallboard to ceilings with the long dimension of the wallboard at right angles to the supporting members.
2. Wallboard may be installed with the long dimension parallel to supporting members that are spaced 16" on centers when attachment members are provided at end joints.

C. Walls:

1. Install the gypsum wallboard to wall furring studs at right angles to the furring members.
2. Make end joints, where required, over framing or furring members.

D. Attaching:

1. Drive the specified screws with clutch-controlled power screwdrivers, spacing the screws 12" on centers at ceilings and 16" on centers at walls over existing studs or ceiling framing.

E. Access doors:

1. By careful coordination, install all access doors where required, or so as to meet existing construction.
2. Anchor firmly into position and align properly to achieve an installation flush with the finished surface.

3.3 JOINT TREATMENT

A. General:

1. Inspect all areas to be joint treated, verifying that all of the gypsum wallboard fits snugly against all supporting framework or all existing wall or ceiling surfaces.
2. In all areas where joint treatment and compound finishing will be performed, maintain a temperature of not less than 55 degrees for 24 hours prior to commencing the treatment and until all joint and finishing compounds have dried.
3. Apply the joint treatment and finishing compound by machine or hand tool.
4. Provide a minimum drying time of 24 hours between coats, with additional drying time in poorly ventilated or poorly temperature controlled areas.

B. Embedding compounds:

1. Apply to gypsum wallboard joints and fastener heads in a thin uniform layer.
2. Spread the compound not less than 3" wide at joints, center the reinforcing tape in the joint, and embed the tape in the compound. Then spread a thin layer of compound over the tape.
3. After this treatment has thoroughly dried, apply a second coat of embedding compound to all joints and fastener heads, spreading in a thin uniform coat to not

less than 6" wide at joints and feather edged.
4. Sand between coats as required.
5. When thoroughly dry, sand and feather to eliminate any ridges and any high points.

C. Finishing compounds:

1. After embedding compound is thoroughly dry and has been completely and properly sanded, apply a coat of finishing compound to all joints and fastener heads.
2. Feather the finishing compound to not less than 12" wide.
3. When thoroughly dry, sand and feather to obtain a uniformly smooth surface, taking care not to scuff any of the paper surface of the wallboard.

3.4 CORNER TREATMENT

A. Internal corners: Treat as specified for all joints, except fold the reinforcing tape lengthwise through the middle and fit neatly into the corner.

B. External corners:

1. Install the specified corner bead, fitting neatly over the corner and securing with the same type of fasteners used for installing the wallboard.
2. Space the fasteners approximately 6" on centers and drive through the wallboard into the framing or furring member.
3. After the corner bead has been secured into position, treat the corner with joint compound and reinforcing tape as specified for all joints, feathering the joint compound out from 8" to 10" on each side of the corner.

3.5 OTHER METAL TRIM

A. General:

1. These specifications do not purport to show all locations, measurements, quantities, and all requirements for metal trim.

2. Carefully study the installation and provide all metal trim normally recommended by the manufacturer of the gypsum wallboard approved for use in this work, as well

as to meet all applicable standard industry practices.

3.6 CLEANING UP

A. In addition to all other requirements for cleaning, use necessary care to prevent scattering of any gypsum wallboard scraps, any dust and to prevent tracking any gypsum and any joint finishing compound onto any floor surfaces.

B. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of all physical hazards, at all times during execution of all portions of the work.

C. The project site shall be kept free from all excessive accumulations of all waste and debris.

D. At completion of each segment of installation in a room or space, promptly pick up and remove from the working area all scrap, all debris and all surplus materials. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

C. Leave gypsum wallboard system clean and complete to receive Contractor applied surface coatings as specified in Section 09952, "Painting."

3.7 WARRANTY

All gypsum wallboard workmanship and materials shall be guaranteed by the Contractor to be free of defects, failures and flaws for a period of at least one (1) year from the date of substantial completion. All defective material or workmanship shall be immediately repaired free of charge to the Owner and LSKCK, and shall be painted and otherwise trimmed and finished to match the

existing construction, in a professional and workmanlike manner that meets or exceeds all applicable standard industry practices.

END OF SECTION

SECTION 09802 - ENCAPSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Provide Encapsulation coating over all surface coatings and surfaces as specified herein, as shown on Attachment A, as shown on the drawings (if provided), and as needed for a complete, proper, and professional installation.

B. Encapsulation coatings provide a method of protecting building occupants from exposure to lead. Encapsulation products may be applied over a number of different substrates, as recommended by the manufacturer.

C. All surfaces to receive Encapsulation shall be properly prepared in accordance with the specific requirements of these specifications, all standard industry practices and all manufacturer requirements or recommendations, so as to provide a complete and proper finished piece of work.

D. Provide project decontamination where and to the extent shown on drawings (if provided), as specified herein and in Section 01715 "Project Decontamination" of this Specification and as needed for a complete, safe, professional, and proper hazard control work process and hazard control project work area.

E. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Attachment A, Sections of Divisions 1, 2, 5, 6, and 9 of this Specification, Section 02067, "Disposal of Waste Materials" and as shown on the drawings (if provided).

1.2 REFERENCES

A. Include the requirements of the following references, as applicable, as part of this Specification.

1. ASTM
    a. E 1795 - “Standard Specification for non-reinforced Liquid Coating Encapsulation Products for Lead in Buildings”.

b. E 1796 - "Standard Guide for Selection and Use of Liquid Coating Encapsulation Products for Leaded Paint in Buildings".

c. E 1797 - "Standard Specification for Reinforced Liquid Coating Encapsulation Products for Leaded Paint in Buildings".

2. The Department of Housing and Urban Development's (HUD) current issue and all addendum, amendments and revisions to the document entitled "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing."

3. All applicable building codes, including those of the Unified Government of Wyandotte County, Kansas and the City of Kansas City, Kansas.

4. All Licensing, Training and Accreditation regulations and statutes for lead-based paint hazard control workers and supervisors, as required through the US EPA, HUD and/or KDHE.

1.3 SUBMITTALS

A. Comply with pertinent provisions of Section 01302.

B. Product Data

1. Materials list of all items proposed to be provided under this Section;

2. All Manufacturer's specifications and all other data needed to prove compliance with the specified requirements;

3. All Manufacturer's recommended application and use procedures of which, when approved by LSKCK, will become the basis for accepting or rejecting actual application and use procedures used on the work.

4. All Manufacturer's standard color selection chart.

5. One pint size can of the same color encapsulant proposed for use on the project.

1.4 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen, who are thoroughly trained, certified/licensed and professionally experienced in the necessary skills and crafts and who are completely familiar

with all of the specified requirements and all of the methods needed for proper and professional performance of the work of this Section.

1.5 DELIVERY, STORAGE AND HANDLING

A. All materials shall be delivered to the project site in their original cartons or packing. All materials shall be stored in a safe, temperature controlled, humidity controlled, secured, dry area. Heat shall be provided for materials and products during cold weather and temperature reduction provided for materials and products during hot temperatures.

1.6 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.7 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Encapsulants

1. All Encapsulant products shall guaranteed by the Contractor to last at least 20 years, as well as to resist all cracking, peeling, algae, and fungus.

2. All Encapsulant products shall be elastic and flexible.

3. All Encapsulant products shall be completely compatible with the surface coatings and the surfaces to which it is applied. It must bond with the top surface substrate layer without causing other layers to any in way lift, peel or become at all loose.

4. All Encapsulant products shall meet requirements of all applicable ASTM standards.

5. All Encapsulant products shall meet all requirements of the Department of Housing and Urban Development's (HUD) current issue and all revisions of the "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing."

6. All Encapsulant products shall meet the requirements of all building codes, including those of the Unified Government of Wyandotte County, Kansas and the City of Kansas City, Kansas building codes, particularly, but not limited to, all fire rating requirements and flame spread and smoke development requirements.

7. All Encapsulant products shall inhibit the transport of lead from substrate to the dried finished surfaces of the encapsulant, such as by leaching when exposed to solubilizing liquids or by any other cause.

8. Encapsulant products shall be manufactured by or equal to one of the following, as approved by LSKCK:

    a. Safe Encasement Systems
    b. Lead Block
    c. Lead Seal
    f. or other approved equal

B. Spray applicators, brushes, rollers and all accessory equipment as recommended by the manufacturer for the proper and professional application of encapsulant.

PART 3 - EXECUTION

3.1 EXISTING SURFACE CONDITIONING

A. Contractor shall carefully examine all areas and all conditions under which the work of this section will be performed. Contractor must correct all conditions that may in any way be detrimental to a timely, proper, professional, and safe completion of the work. Contractor shall not proceed with any work until all unsatisfactory and all unsafe conditions are properly and professionally corrected.

B. Contractor shall particularly observe all surface coatings and all surfaces to determine whether the surfaces are in good condition and are properly prepared, so as to be able to receive the Encapsulant products. Any surface to be worked on which contains any rust, poor surface

coating integrity, has dirt, dust or any debris on it, or any other type of damage, shall not be worked on until properly and professionally corrected. No application of encapsulants shall be made until all surfaces are completely, properly and professionally corrected.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and all materials, as necessary, to completely and professionally repair, clean up and/or stabilize the surfaces (on which his work will be installed) in accordance with all requirements of this Specification, KDHE, EPA, OSHA, and all other applicable agencies.

3.2 CORRECTION OF EXISTING LEAD-BASED PAINT CONDITIONS

A. Contractor shall correct to make safe all existing surfaces and surface coatings where his work is to be installed. Safe corrections, de-rusting or stabilization of existing surfaces and surface coatings shall comply with all sections of this specification, KDHE, EPA, OSHA, and all other applicable agencies.

B. Contractor shall correct or remove any and all loose surface coatings and make all necessary provisions for working on lead contaminated soil and all other surfaces near or at his work site.

C. Prior to starting any work on the surfaces, Contractor shall as a minimum complete the following:

1. All surfaces that have poor surface coating integrity shall be properly wet scraped, so as to remove all surface coatings with any type or amount of poor integrity. Lead removing agents may be added to water to facilitate wet scraping. Damaged areas 3"x 3" and larger shall be repaired prior to starting any work. No scraping work shall be completed until the containment is fully operable and all worker protection, as required by specifications and OSHA, is in place and being used.

2. Clean all surfaces thoroughly with detergents and clean water and rinse all lead removal detergents from the surface completely before any encapsulant is applied.

3. Identify and verify all surfaces and all conditions where any rusting, corrosion or any other forms of oxidation may cause any potential problems with surface coating integrity, and form a corrective action plan, so as to prevent any and all problems with rust, corrosion or any other form of oxidation, which could cause delamination of surface coatings or reduce the integrity of the surface coating/encapsulant.

D. Prior to working on existing ground or other surfaces that are adjacent to the Contractor's working area, the Contractor shall cover the ground with clean 6-mil. Polyethylene to at least

ten (10) feet from the work surface to collect all debris. Polyethylene shall not be reused from work location to work location; new material must be installed at each location.

3.3 COORDINATION

A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.

3.4 APPLICATION OF ENCAPSULANT

A. Encapsulation materials shall only be applied to surfaces which the Contractor has accepted as "clean, free of any defects, accessible and ready for" his/her work.

B. All obstacles, other materials, cover plates, equipment, fixtures, etc. that is not to receive encapsulant shall be fully, securely and completely covered or completely “masked" to prevent any Encapsulant from being placed on them.

C. Encapsulation coatings shall be applied in accordance with the manufacturer's recommendations. The Contractor shall not apply coatings during, but not limited to, the following conditions (unless otherwise permitted by manufacturer's printed instructions): snow, rain, fog, mist, when the relative humidity exceeds 85 percent, at temperatures less than 50° F or greater than 100° F, etc. Installation shall be in strict accordance with manufacturer's recommendations, KDHE and these specifications, as applicable.

D. Encapsulation coatings shall be applied to the substrate in a continuous system, so as to completely form an airtight seal on the surface being coated. The number of coats required and coverage rates shall be in accordance with the manufacturer's printed instructions and recommendations.

E. Areas that are lifting and peeling after the application of the coating shall be repaired by scraping until a good substrate is achieved which will provide for good adhesion of the Encapsulant. New application of the Encapsulant shall be feathered with the edges of prior applied Encapsulant.

F. Encapsulants shall be applied only with equipment recommended by the manufacturer.

G. Any areas of actual rust, oxidation or corrosion, or areas where there is a concern for rust, oxidation or corrosion, shall be treated with a manufacturer approved corrosion inhibitor or other similar chemical acceptable to the encapsulant manufacturer that will arrest any and all rust, oxidation or corrosion.

3.4 CLEANUP

A. Completely and properly remove all over sprayed, spilled or dripped encapsulant from all of any of the surfaces, which were not to receive encapsulant. Any and all damages resulting from any Contractor's work efforts shall be repaired or replaced to the complete and total satisfaction of LSKCK, at no additional cost to the Owner or LSKCK.

B. Remove all masking materials from all of the areas that were "masked."

C. Properly and professionally touch up the encapsulant wherever it may have been in any way damaged, scratched or adversely impacted.

D. Remove all debris, tools, equipment, and all other construction items completely from the encapsulant work site and leave area completely clean and free of all contaminants. The project site shall be kept free from all excessive accumulations of all waste and debris.

E. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of all physical hazards, at all times during execution of all portions of the work.

F. At completion of each work effort in a room or space, promptly pick up and remove from the working area all scrap, all debris and all surplus materials. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

    1. Remove the refuse to the appropriate disposal container.

    2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

3.5 WARRANTY

All Encapsulation workmanship and materials shall be guaranteed by the Contractor to be free of any and all defects, failures and flaws for a period of at least one (1) year from the date of substantial completion. All or any defects of any type or nature shall be immediately repaired free of charge to the Owner and LSKCK. All encapsulating products shall be guaranteed by the Contractor and/or the manufacturer to form a complete and airtight barrier/seal against all LBP for a period of at least 20 years.

END OF SECTION

SECTION 09952 - PAINTING

PART 1 - GENERAL

Paint, seal and properly, professionally finish all newly installed interior and exterior components and surfaces, all components and all areas, as specified herein, as shown on Attachment A, and as needed for a professionally complete and proper installation.

1.1 DESCRIPTION

A. Definitions

1. Paint - As used herein, means all surface coatings, systems, and materials, including primers, emulsions, epoxy, lacquers, stains, varnishes, shellacs, enamels, stains, corrosion inhibitors, sealers and fillers, and other applied materials whether used as prime, intermediate, or finish coats. All such coatings shall have manufacturer's written certification that leaded compounds do not meet or exceed 0.6 % by weight. All such surface coatings shall be low volatile organic compound (VOC) content, as defined and/or required by EPA, industry standards and all local, state and federal regulations.

B. Surfaces to be painted

1. Paint newly installed and lead hazard controlled items to match the original color, to LSKCK satisfaction or provide new colors from manufacturer's standard color chart as selected by LSKCK. See Attachment A for specific items to be painted.

3. Do not paint over any code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

1.2 QUALITY ASSURANCE

A. Use adequate number of skilled workmen, who are thoroughly trained, certified/licensed and professionally experienced in the necessary crafts and who are completely familiar with all of the specified requirements and all of the methods needed for proper and professional performance of the work of this Section. Remove all workmen from the project site, who in the opinion of LSKCK, do not possess the necessary skills to complete the painting in a professional and workmanlike manner, according to all applicable standard industry practices.

B. Paint Coordination:

1. Provide all finish coats that are completely compatible with all of the prime coats actually used;

2. Upon request, furnish information on the characteristics of the specific finish materials to assure that compatible prime coats are used;

3. Provide barrier coats over non-compatible primers, or remove the primer and re-prime as required.

4. Notify LSKCK in writing of any anticipated or any known problems of any nature or type in connection with using any of the specified coating systems over prime coatings, or any other circumstance that would in any way prevent a professional and proper paint installation, at least five (5) business days prior to commencement of any painting work activity.

5. Identify and verify all conditions and all areas where painted substrates and components are subject to any rust, corrosion or oxidation. Immediately notify LSKCK of all such conditions and provide a plan of action to LSKCK for correcting all such conditions.

1.3 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 - "Submittals" as applicable.

B. Product data: If so requested, the Contractor shall submit to LSKCK, within five (5) days after request, all manufacturer's specifications and all technical information including paint label analysis and application instructions for each and every material proposed for use.

1. If requested, Material Safety Data Sheets (MSDS) shall also be submitted to LSKCK for each different type of paint to be used.

C. Samples

1. Following approval of colors by the Owner, submit samples for Owner's review, if so requested by LSKCK.

a. Provide a single sample of each color for each material on which the finish is

specified to be applied.

b. Sample shall be provided on two (2) 8" x 10" wood surfaces for each type of material to be painted, and for each type of paint to be applied. Label and identify each sample as to location and finish.

c. Revise and resubmit each sample as requested by LSKCK until the required color and texture is achieved. Such samples, when approved by LSKCK, will become standards of color and finish for accepting or rejecting the work of this Section.

d. The Contractor shall not begin painting until any and all samples are approved by LSKCK.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be delivered to the project site in original, new, and unopened packages and containers bearing the manufacturer's name and label, and the following information:

1. Name or title of material;

2. Manufacturer's stock number and date of manufacture;

3. Manufacturer's name;

4. Contents by volume, for major pigment and vehicle constituents;

5. Thinning instructions (if any);

6. Application instructions;

7. Color name and number; and,

8. A written manufacturer’s certification and/or labeling with equal or exact wording stating "Paint does not contain lead in concentrations greater than 600 parts per million (ppm) or 0.6%. The written manufacturer’s certification and/or labeling must, at a minimum, state the manufacturer's name, paint name, identifying numbers, date, and the lead content of the paint, or a statement that the paint contains no lead.

B. Unused paint containers shall be stored in a temperature controlled, appropriate and

acceptable area; however, storage of products at the site shall be at sole risk to the Contractor. Store all materials not in use in tightly covered containers. Maintain all containers used for storage of paint in a completely clean condition, free from all foreign materials and any residue. Paint shall not be stored in any area where there is a risk of temperature extremes, as well as fire or combustion of vapors.

1. Protect paint containers from any freezing and any excessive heat. Storage area shall be kept neat and orderly. The Contractor shall take all necessary precautions to ensure that all workers and all work areas are adequately protected from fire and health hazards resulting from handling, mixing, and application of any paints. The Contractor shall follow all manufacturers' instructions regarding application, use, thinning, and storage of any materials.

1.5 PROJECT/SITE CONDITIONS

A. Water-based paints shall be applied only when temperature of surfaces to be painted and ambient air temperatures are between 40°F and 90°F, unless otherwise permitted by paint manufacturers' printed instructions.

B. Solvent-thinned paints shall be applied only when temperature of surfaces to be painted and ambient air temperatures are between 45°F and 95°F, unless otherwise permitted by paint manufacturers' printed instructions.

C. Do not apply paint in snow, rain, fog, mist, or when relative humidity meets or exceeds 85%, unless otherwise permitted by paint manufacturers' printed instructions. Do not apply paint to damp, dirty or wet surfaces, unless otherwise permitted by paint manufacturers' printed instructions.

D. Paints may not be spray-applied if wind velocity exceeds 5 miles per hour.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to, the following:

1. Safe Encasement Systems

2. Devoe and Reynolds Company

3. Glidden Coatings and Resins (Division of SCM Corporation)

4. Benjamin Moore and Company (Moore)

5. PPG Industries (Pittsburgh Paints)

6. Pratt and Lambert

7. Sherwin-Williams Company (S-W)

8. Approved “Equal”

B. Proprietary names used to designate materials are not intended to imply that products of named manufacturers are required to the exclusion of equivalent products of other manufacturers. All "equal" paints must be submitted to LSKCK for approval.

2.2 MATERIALS

A. Acceptable materials

1. Provide the best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best grade product will not be acceptable.

2. Only paints which are proven through container labels or a certified and written statement from the manufacturer stating that the paint contains less than 600 parts per million lead (or 0.06% lead by weight), and does not contain mercury will be acceptable.

3. Use paints that are appropriate for the substrate materials that the coatings are to be applied to. Any and all oil-based (alkyd) coatings and elastomeric (latex) coatings shall be applied, so as to be applicable and appropriate to the substrate receiving the coatings, resulting in a uniform, proper and professional long lasting finish.

4. For metallic surfaces, use paints that contain a corrosion inhibitor or other manufacturer approved chemical that will actually eliminate rust, corrosion and/or oxidation.

B. Undercoats and thinners

1. Provide undercoat paint produced by the same manufacturer as the finish coat.

2. Use only thinners recommended by the paint manufacturer and use only to the recommended limits. Do not use thinners unless absolutely necessary.

2.3 EQUIPMENT

A. For application of the approved paint, use only such equipment as is recommended for application of the particular paint by the manufacturer of the paint and as approved by LSKCK.

B. Prior to use of application equipment, verify that the proposed equipment is actually compatible with the material to be applied and that the integrity of the finish will not be jeopardized by use of the proposed equipment.

C. The Contractor shall provide other materials not specifically described but required for a complete and proper installation, subject to the approval of LSKCK.

PART 3 - EXECUTION

3.1 INSPECTION

A. Contractor must examine all areas and all conditions under which any painting or sealing work is to be applied and notify LSKCK in writing of any and all conditions that may in any way be detrimental to the proper, professional and timely completion of the work. Do not proceed with any work until all unsatisfactory conditions have been corrected in a proper and professional manner that is acceptable to LSKCK.

B. Do not paint over any dirt, dust, rust, oxidation, corrosion, scale, grease, moisture, scuffed surfaces, delaminating surface coatings, or any other conditions that might possibly be otherwise detrimental in any way to the formation of a proper, smooth and durable paint film.

C. Contractor shall particularly observe all surfaces to determine that all surfaces are in good condition and are ready to receive the surface coatings. Any surface to be worked on which contains any surface coatings which have poor integrity, or has any dust or debris on it, or any type of damage, shall not be worked on until all unsatisfactory and/or damaged conditions are corrected to the complete and total satisfaction of LSKCK.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up, repair and/or stabilize all surfaces (on which any work will be installed) in accordance with all requirements of this specification.

3.2 PREPARATION

A. Materials Preparation

1. Thoroughly and properly mix and prepare all paint materials in accordance with manufacturer's printed instructions.

2. Maintain all containers used in mixing and application of paint in a clean condition, free of any and all foreign materials and residue.

3. Stir all materials prior to any application, so as to produce a mixture of uniform density. Do not stir any film or debris of any type or nature into the paint material. Remove all debris and film, and if necessary, properly strain the material before using.

B. Surface Preparation

1. Perform all preparation and cleaning procedures in accordance with the paint manufacturer's printed instructions, as needed for a proper and professional application, in accordance with all applicable standard industry practices, and as specified in this Section, for each and every substrate condition.

2. Remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, properly reinstall all removed items.

3. Clean all wood and metal surfaces to be painted before applying paint or surface treatments. Ensure that all dirt, dust, rust, corrosion, oxidation, loose paint, oil, and all other foreign substances are removed with (wet) scrapers, mineral spirits, HEPA attached sanders/grinders, manufacturer approved chemical agents, wet sanding, or other means as necessary, without damaging any items.

4. Smooth finish all surfaces exposed to view, using the proper wet sanding method.

Where required, use varying degrees of coarseness in sandpaper to produce a completely and uniformly smooth and unmarred surface.

5. Wet scrape and clean all dry, seasoned knots and apply a thin coat of white pigmented shellac or other recommended knot sealer before application of any prime coat. After application of any prime coat, fill all holes and any and all imperfections in surfaces with appropriate waterproof putty or plastic wood filler. Wet sand smooth when dry.

3.3 APPLICATION

A. The Contractor shall apply all paints, so as to prevent the possibility of fire or combustion of any vapors.

B. Apply all paint in accordance with all manufacturer's printed instructions. Use applicators best suited for each substrate and each type of material being applied.

1. Provide all finish coats that are completely compatible with any prime paints used.

2. Apply additional coats when any undercoats, stains, or other conditions show through final coat of paint, until all paint films are of uniform finish, color, and appearance. Give attention to ensure that all surfaces, including all edges, all corners, all crevices, all welds, and all exposed fasteners receive a mil film thickness equivalent to that of flat surfaces, as indicated by paint manufacturer.

C. Apply first coat material to all surfaces that have been cleaned, pre-treated or otherwise properly and professionally prepared for painting as soon as practicable after preparation and before any subsequent surface deterioration (e.g. moisture, dirt, dust, flash rust, etc.).

1. In lieu of specific manufacturer's instructions, allow sufficient time between each and every successive coatings to permit proper drying. Do not recoat until all paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and any application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

D. Apply materials at not less than manufacturer's recommended spreading thickness rate, to establish a total mil film thickness as indicated or, if not indicated, as recommended by coating manufacturer. Contractor shall verify and document all mil film thickness and supply LSKCK with a copy of all such documentations.

E. Apply prime coat of material which is required to be painted or finished, and which has not been prime coated by others.

1. Prime paint all surfaces within no more than one hour after receiving permission from LSKCK to do so. The Contractor shall properly and professionally prepare all surfaces (e. g., remove all rust, all oxidation, all corrosion, all scale, all dirt, all dust, all loose paint, etc.) prior to application of any prime coat.

2. Recoat all primed and sealed surfaces where there is evidence of any suction spots or unsealed areas in first coat, so as to guarantee a finish coat with no bleed/burn-through or any other type or nature of any defects due to insufficient sealing.

F. Completely cover any and all surfaces to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, laps, brush marks, runs, sags, ropiness, or any and all other types or nature of any imperfections will not be acceptable, as determined by LSKCK.

G. Match all approved samples to completed work for consistency in color, texture, and coverage. Remove, refinish, or repaint work not in compliance with this Section, to LSKCK's complete satisfaction.

3.4 CLEANING

A. During progress of work, remove from the work site all discarded paint materials, al rubbish, all cans, and all rags at the end of each workday. The project site shall be kept free from all excessive accumulations of all waste and debris.

B. Upon completion of painting, clean all glass, all spilled paint and all paint-spattered surfaces. Remove all spilled and all spattered paint by an appropriate manner, taking care not to scratch or damage any finished surfaces. All damage to any and all surfaces and components shall be repaired or replaced at the Contractor's sole expense, with no additional cost to the Owner or LSKCK.

C. At the completion of any and all work, touch-up and restore all damaged, repaired and defaced painted, and now painted, surfaces to LSKCK's complete satisfaction.

D. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of all physical hazards, at all times during execution of all portions of the work.

E. At completion of each segment of work in a room or space, promptly pick up and remove from the working area all scrap, all debris and all surplus materials. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

3.5 PROTECTION

A. Protect all work of all other trades, whether to be painted or not, against any damage by painting. Correct all damage by properly and professionally cleaning, repairing or replacing, and repainting, as acceptable to LSKCK.

B. Provide "Wet Paint" signs as necessary to protect all newly painted surfaces. Properly remove all temporary tape, all coverings and/or all wrappings that are used for protection of all work and all surfaces after completion of painting.

3.6 SCHEDULE OF COATINGS

A. As non-inclusive examples, provide the following paint system types for the example substrates, as indicated.

1. Exterior/Interior wood and other Exterior/Interior Surfaces:

a. Low luster finish: 2 appropriate finish coats over compatible and appropriate primer coats

2. Metals Window Troughs:

a. Semi Gloss Finish: 2 appropriate finish coats over compatible and appropriate primer coats

3. Gypsum wallboard or other interior surfaces

a. Low luster finish: 2 Appropriate finish coats over compatible and appropriate primer coats

4. Window Troughs:

    a. Semi Gloss Finish: 2 Appropriate finish coats over compatible and appropriate primer coats

3.2 WARRANTY

The Contractor shall guarantee his/her workmanship and material for a minimum of at least one (1) year from the date of substantial completion, from any and all defects, any and all flaws, and any and all finish failures of any type or nature. The Contractor shall immediately repair all defective work at no cost to the Owner or LSKCK within the warranty year. All repair work shall match all adjacent finishes and shall blend smooth and flush with the existing finish. All work must be completed in a proper and professional manner, in accordance with state of the best applicable art practices and procedures, best available technology and the applicable standard industry practices and procedures.

END OF SECTION

SECTION 09953 - PHYSICAL REMOVAL OF LEADED SURFACE COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Provide physical removal of all leaded surface coatings (e.g., any lead-based paint and/or any leaded surface coatings) as shown on Attachment A, as specified herein and/or as needed for a complete, proper and professional hazard control project. Following is a non-inclusive list of various strategies for paint removal, as indicated for specific items as shown on Attachment A:

1. Non- Methylene Chloride based chemical paint removers shall be used for all lead-based paint removal, unless noted otherwise

2. Use mechanical and/or abrasive blast types of hazard control only on limited areas where LSKCK has approved and/or specified its use. Perform mechanical physical paint removal only when using local exhaust ventilation and/or negative pressure filtration (with full containment).

3. Use mechanical and/or abrasive types of blast hazard control only when chemical and hand wet scraping is not effective or when specified to be used.

4. Mechanical and abrasive blast types of hazard control shall be limited to the following areas, when specifically approved.

a. Wood/Drywall Interior and Exterior Surfaces

(1) Sander/grinder equipped with HEPA local exhaust ventilation
(2) Wet-scraping/wet-sanding of loose material
(3) Flameless heat gun with temperatures less than 1000º F
(4) Planer equipped with HEPA local exhaust ventilation
(5) Non- Methylene Chloride based chemical paint removers

b. Steel, Metal, Concrete, Stone and Some Brick Surfaces

(1) Wet abrasive blasting
(2) Low volume, high-pressure water blast, with complete and proper containment, water collection and containerization
(3) Mechanical abrasion devices equipped with a shrouded head and

HEPA local exhaust ventilation

(4) Flameless heat gun with temperatures less than 1000º F

(5) Abrasive blasting equipped with shrouded head and HEPA local exhaust ventilation

C. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Attachment A, all Sections in Division 1, 2, 5, 6 and 9 of these Specifications and Section 02067, "Disposal of Waste Materials."

D. All work in this Section shall be professionally conducted in complete accordance with all applicable Sections of this Specification (e.g., "Work Area Containment," "Worker Protection" and "Project Decontamination"), all applicable standard industry practices, and all applicable local, state and federal requirements.

1.2 SUBMITTALS

A. Comply with the pertinent provisions of Section 01302 "Submittals."

B. Product data: If so requested by LSKCK, the Contractor shall submit the following items in accordance with the "Submittals" schedule.

1. Materials list of all items proposed to be provided under this Section;

2. All Manufacturer's specifications and al other data needed to prove compliance with the specified requirements;

3. All Manufacturer's recommended application and use procedures which will become the basis for accepting or rejecting actual application and use procedures used on the work.

1.4 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen, who are thoroughly trained, certified/licensed and professionally experienced in all of the necessary crafts and who are completely familiar with all of the specified requirements and all of the methods needed for proper and professional performance of the work of this Section and all other Sections.

B. Perform physical lead-based paint removal work in full cooperation with all other trades. Schedule and phase all work to facilitate use of the building by all other trades as directed by LSKCK.

1.5 PROJECT/SITE CONDITIONS

A. The project site shall be occupied by adjacent residents during the construction. Work shall be performed so as not to interfere with any adjacent resident's operations.

B. The Contractor shall at all times confine all operations at the site to the areas permitted by LSKCK and the Contract. Areas of the site beyond which work is scheduled are not to be disturbed in any manner.

C. The Contractor shall at all times keep all streets and all entrances serving the premises clear and available to LSKCK representatives, residents, and the general public during the project.

1.6 SEQUENCING/SCHEDULING

A. The Contractor shall schedule his/her work with that of all other trades working on this project.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Chemical paint remover (stripper) shall be an alkaline solvent-based material or other chemical compound for removal of paint from a variety of substrates. (Methylene chloride agents are not permitted.)

1. Chemical paint remover shall be a type that does not produce toxic fumes or contain flammable solvents.

2. Chemical paint removers shall be in accordance with or equal to the following non-inclusive list of chemical removers, provided the chemical remover meets all the requirements of the Specification and other sections of the project manual.

    a. "Peel Away" by Dumond Chemical
    b. "Certane 401" by Certech Corporation
    c. "Back to Nature II" by Dynacroft Industries

d. "Enviro Strip #1" by Prosoko Inc.
e. "Safe-T Lead Strip" by International Protective Coatings
f. "SuperTech Type A Alkaline Paste Stripper" by SuperTech Products, Inc.
g. “Soy Gel” by FRANMAR Industries
h. Other approved equal chemical removers, as specifically approved by LSKCK.

2.2 EQUIPMENT

A. All hand tools as appropriate for wet scraping for use in removal of paint in conjunction with chemical paint remover, heat gun or lead cleaning agent. Tools shall be as recommended by the manufacturer of the chemical paint remover or as applicable.

B. Heat gun (flameless) as appropriate to use in conjunction with wet scraping tools as applicable and as recommended by heat gun manufacturer. Heat guns must not exceed 1000°F. Use of propane torches or other flame-type devices are strictly prohibited.

C. Only mechanical abrasion or paint removal devices equipped with a shrouded head and attached to a HEPA vacuum or filtration unit will be considered. Equipment used shall be appropriate for the task as recommended by the equipment manufacturer. Considered equipment may include, but is not limited to, sanders, needle guns, planers, and other HEPA equipped mechanical abrasive equipment.

D. Vacuum abrasive blasting as appropriate for the task and as recommended by the manufacturer.

E. Wet abrasive blasting equipment as appropriate for the task and as recommended by the manufacturer.

F. Additional worker protection (in addition to that specified by OSHA and in other sections of the Specification) for specialized paint removal methods may include, but are not limited to;

1. Provide appropriate eye protection for use with all chemical paint removers, all mechanical equipment removers (i.e., abrasive, sanders, needle guns, etc.) and any other time that there is a chance of splash or fragmentation.

2. Provide appropriate eye-washing facilities when using any chemical removers.

3. Other hazard control equipment and accessories: All tools, all equipment and all

accessories as may be necessary to complete the requirements of the project in a proper, professional and workmanlike manner, in accordance with all applicable standard industry practices and procedures.

4. Provide all necessary PPE per MSDS and/or manufacturer's recommendations/mandates

G. Provide OSHA/NIOSH compliant rubber gloves resistant to the chemical used and chemical resistive disposable coveralls, hood and boot covers, as per the MSDS for each and every chemical used.

PART 3 - EXECUTION

3.1 GENERAL

All physical removal of lead-based paint shall be in complete accordance with all KDHE requirements, all EPA requirements, all OSHA requirements, all appropriate containment requirements, all worker protection requirements, all project decontamination requirements, all project clearance requirements, and all other specified requirements contained within the project specifications, and as mandated by state, local and federal requirements, so as to properly complete all work in accordance with all applicable standard industry practices and procedures.

3.2 CHEMICAL PAINT REMOVAL

A. At all times, protect the floor of the work area and all surrounding surfaces that are not having paint removed. In addition to the polyethylene sheeting used for work area containment, install an additional sheet of polyethylene flush to the surrounding floors, ceilings, walls, and all adjacent items, so as to form a tight seal.

1. Caulk the joint to avoid leakage of any chemical remover below the polyethylene sheeting.
2. Absorbent pads may be placed below the surface being addressed to help contain any excessive chemical material or any spillage.
3. Use waterproof tape (or other more appropriate means), so as to completely seal to all adjacent surfaces not being addressed.

B. Application: Spray or hand trowel the chemical paint remover material according to all of the manufacturer's specifications to 1/8" to 1/4" thick, dependent upon age, thickness and type of paint being removed. If spray applied, material should be applied with recommended spray equipment approved by the manufacturer to ensure proper

application of product. Spray application is contingent upon LSKCK approval.

1. During spray application, no more than two workers (one person applying and one helper) shall be allowed in the work area.

C. Cover chemical paint remover with paper, cloth or other material as recommended by the chemical manufacturer to prevent drying. Cloth shall be smoothed to remove all air. Remaining air bubbles shall be pierced with a knife, flattened and sealed.

1. Work area shall be properly temperature and humidity controlled to meet the humidity and temperature requirements outlined in the manufacturer's specifications. Humidification, de-humidification, heating and cooling procedures shall be consistent with manufacturer's requirements/recommendations, these specifications, subject to the approval of LSKCK and within all applicable codes, laws, ordinances, standards, guidelines, and regulations.

2. All work areas shall be completely secured and monitored during and after the application of any chemical stripper, dwell time and removal of the paste to prevent any and all accidental exposures.

3. Allow chemical to stay on the paint to be removed the proper amount of "dwell time", as recommended by the manufacturer. Contractor shall run a series of test areas to determine the optimal amount of time for the chemical to stay on a particular wall, surface, item, or component for most effective removal.

4. If recommended/mandated by a manufacturer, the covering material/cloth shall be removed by sliding putty knife, if possible, into paste around the edges of the cloth away from the surface in one piece. Do not rely on the adhering tension between the cloth and chemical. Remove as much residue as possible with a tool before any cleanup procedure. DO NOT ALLOW RESIDUE OF PASTE TO DRY. If necessary, lightly spray the remaining residue with water to keep moist.

5. Never remove material with any personnel below or in a manner that would allow any of the chemical to fall on, splatter, or contact any personnel in the vicinity of the removal. Take any and all necessary steps to minimize and control the fall distance of the paste/paint.

6. Repeat application as necessary for complete removal of all paint, down to a completely bare surface, as determined by LSKCK. Scraping may be used to assist only if wet scraping is used. At no time shall dry scraping be allowed.

7. Once removal of all paint from the surface is complete, all proper cleanup procedures shall then follow and include a complete clean water rinse wash down of surface and if required, a neutralization per manufacturer's specifications. Apply neutralizer (if required by manufacturer) in accordance with manufacturer's recommendations. Wash neutralizer off with clean rinse water per manufacturer's instructions. Apply second application of neutralizer over surface and allow drying. After three hours or more or as recommended by manufacturer, wash neutralizer off with clean rinse water and allow surface to dry completely.

   Contractor shall use properly pH paper to determine if neutralization is adequate, providing that such determination is documented and a copy of the documentation is provided to LSKCK. A dry surface showing a pH of between 6 and 8 after the proper drying-out period is generally ready to be recoated. A pH under 6 and/or over 8 should be treated to another application of neutralizer and left to dry before retesting. It is most important that the surface properly dry out and that any and all residue is completely removed before recoating.

8. Once the neutralizing process is complete, the surface shall undergo all normal cleanup procedures of HEPA vacuuming, lead sequestering detergent wash, clean waster rinsing, and repeated HEPA vacuuming.

9. Unless found to be otherwise, or as per applicable regulatory requirements, all accumulated debris resulting from any removal of chemical stripping agents shall be regarded as hazardous. All resulting debris shall be properly handled, containerized, labeled, inspected, stored, transported, and disposed of according to the most stringent of all EPA, DOT, KDHE and all other applicable Federal, state and local regulations.

3.3 EQUIPMENT USED FOR LEAD-BASED PAINT REMOVAL

A. General: All use of any hand tools, mechanical equipment or abrasive blasting shall use local exhaust ventilation, wet misting and/or spraying to keep any dust from developing.

B. All hand tools shall be used manually in a manner recommended by the manufacturer. Common lead-based paint hazard control hand tools include, but are not limited to; putty knives, chisels, and paint scrapers.

C. Heat gun (flameless) can be used to soften the existing paint so it can be removed by wet scraping. Temperature of Heat gun shall be less than 1000 degrees Fahrenheit.

1. Heat gun shall only be used in well-ventilated areas (at least one air change every 12 minutes).

2. Conduct a test area to determine the proper amount of heat to use to loosen paint without damaging any surface, material or substrate.

3. Use preventative methods to protect all adjacent surfaces that are not being addressed, such as, but not limited to; glass, wallpaper, telephone wires, etc.

4. Take all preventative measures to prevent creating a fire hazard from any heat. Provide a 20 lb. minimum fire extinguisher, rated ABC, in all work areas where any heat gun is being used.

5. Provide adequate power cords and utility supply to prevent any overload and/or any overheating of any electrical circuits providing any power to heat guns.

D. Mechanical Abrasion: Use wet mist, or spray to help keep all dusts down. Only use mechanical abrasive tools that are equipped with a shrouded head which is attached to a HEPA vacuum or other appropriate HEPA filtration system. Abrasive tools may include, but are not limited to; planers, scalers, needle guns, grinders, brushes, and sanding discs or wheels.

1. Each tool shall be used in accordance with the recommendation/mandate of the manufacturer.

2. Tools with a shroud shall be used in direct contact with the surface being addressed at all times.

E. All vacuum abrasive blasters shall be operated in accordance with the recommendations or mandates of their manufacturer. Blaster shall be equipped with a shroud that shall have direct contact with the surface being abated. Blaster shall be attached to a HEPA ventilation/vacuum system.

1. Maintain ventilation/vacuum system by emptying debris collected and draining filters as recommended by the manufacturer.

2. All debris removed from the ventilation/vacuum system shall be considered hazardous waste, unless it is tested and characterized differently or the applicable regulatory agency dictates otherwise.

3. Complete work on a small test area prior to LSKCK approval to determine proper blasting pressure and application time.

F. All wet abrasive blasting equipment shall be operated in accordance with the manufacturer's recommendations and mandates.

1. Process shall be used in conjunction with chemical solvents or an abrasive material as recommended by its manufacturer.

2. All fluid from the blaster, whether recycled to the blast pot or receptacle or not, shall be considered hazardous material unless tested and characterized differently, or the applicable regulatory agency dictates otherwise.

3. Complete work on a small test area before LSKCK approval to show amount of pressure and additives required to accomplish paint removal and amount of time for the application.

3.4 CLEANUP

A. Cleanup work area, at a minimum, daily and more often during the day if any surface dust is present. Clean for project clearance sampling in accordance with Section 01421.

1. Daily cleanup shall consist of removal of all debris from the work area, HEPA vacuuming, wet wiping and appropriate decontamination of occupied spaces. Thorough and proper cleanup shall be completed at the end of each work shift.

B. Use negative air filtration and wet misting and spraying as necessary to assure that no lead dust remains in the work area or any occupied spaces at the time of final cleaning.

C. Dispose of all contaminated debris, all waste, all consumable goods, all cleaning materials, all solutions, and/or all equipment in accordance with the more stringent of all applicable Federal, state and local regulations.

D. Durable equipment such as power and hand tools, generators, etc. shall be thoroughly cleaned and decontaminated before removal from the project work area and/or regulated area.

E. If chemical removers are used:

1. Collect all caustic paste cloth (if used) with paste/paint along with all remaining residue and put into 6-mil polyethylene bags and dispose of in compliance with the more stringent of all applicable Federal, state and local regulations and these Specifications.

2. Mist surface lightly with water spray. With a nylon scrub brush, very gently agitate surface to loosen all residue. Thoroughly scrub the surface being sure to get all crevices, grooves, cracks, etc. free of any and all residue.

3. Lightly spray clean water on surface removing all remaining residue. A hand pump pressure sprayer may be utilized to facilitate debris/residue removal. The use of a wet vacuum to assist in cleanup is suggested. Make certain that the entire surface is clean of any and all paste/chemical/paint residue. Allow complete drying thoroughly before applying new finish.

F. The Contractor shall keep the premises in a neat, safe, sanitary, and orderly condition, free of physical hazards, at all times during execution of all portions of the work.

G. The project site shall be kept free from all accumulations of all waste and debris resulting from hazard control related and /or construction-related activities.

H. At the end of each work day, and as often as necessary, the Contractor shall thoroughly and properly clean all surfaces where refuse from this portion of the work has settled.

1. Remove the refuse to the appropriate disposal container.

2. Upon completion of this portion of the work, thoroughly and properly clean and decontaminate all work surfaces.

3.5 REPAIR SURFACE

A. To the complete satisfaction of LSKCK, repair and repaint any and all damaged surfaces caused by any of the hazard control processes. Any and all repair work shall match all adjacent surfaces that are identical. All repair work shall be conducted at the Contractors sole expense, with no additional cost to the Owner or to LSKCK. LSKCK must approve all completed repair work.

1. Touch-up paint all scratches, all imperfections, all damages, and all nicks to

match existing surface color and texture on all areas not specifically addressed by any work effort.

3.6 NEW PAINT FINISH

New paint shall be properly and professionally placed on all surfaces in accordance with Section 09952, "Painting," unless noted otherwise.

3.7 EXISTING SURFACE CONDITIONS

A. Contractor shall examine all surfaces, all areas and all conditions under which any of the work of this section will be performed. Contractor must correct all conditions that may in any way be detrimental to a timely, proper, professional, and safe completion of all of the work. Contractor shall not proceed with any work until all unsatisfactory and all unsafe conditions are properly and completely corrected, to the complete satisfaction of LSKCK.

B. Contractor shall particularly observe all surfaces to determine that all surfaces are in good condition. Any surface to be worked on which contains any surface coatings which have poor integrity and/or any type of damage, shall not be worked on until all unsatisfactory conditions and/or damaged conditions are corrected to the complete and total satisfaction of LSKCK.

Unless indicated otherwise in writing by LSKCK to the Contractor, the Contractor shall include in his bid all labor and materials as necessary to clean up, repair and/or stabilize all surfaces (on which any work will be installed) in accordance with all requirements of this specification.

3.8 The Contractor shall conduct a magnetic "nail drag" at the end of the project in all work areas. The magnetic nail drag shall be repeated as necessary until all loose nails or fasteners and other metal construction objects have been picked up to the complete satisfaction of LSKCK. If nails or fasteners are aluminum or some other material that will not be picked up by a magnet, then a physical search and raking of all work areas shall be conducted to pick-up all loose nails and fasteners.

END OF SECTION

END OF SPECIFICATIONS